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EDITORIAL.

THE attention of pharmacists is called to the following resolution, which was adopted at the meeting of the Medical Society of the County of New York, held Nov. 27, 1876:

"The Medical Society of the County of New York recommends to its members the adoption of the *Metric System* in writing prescriptions."

This resolution was adopted without a dissenting voice. It is probable, therefore, that many physicians will henceforth adopt this system, and it is incumbent upon the pharmacists to provide themselves with suitable weights for dispensing these prescriptions. In purchasing such weights, it is well to remember that the cheapest often turn out, in the long run, to be the most expensive. The price of the very best and most accurate weights obtainable, those of Becker & Sons, of New York, is reasonable and fully equal to their quality. In putting up prescriptions written according to the metric system, it is much preferable to employ decimal weights at once, than to reckon them over into apothecary's weights, and to employ the latter. Physicians heretofore accustomed to the old system need not be discouraged by any seeming difficulty. It is not by any means necessary to pedantically translate one system into the other. The rule is to choose the *nearest round number ending in* 0 *or* 5, excepting in the case of very potent remedies. Indeed, by remembering the following two simple rules, the translation becomes exceedingly easy:

1. In prescribing the equivalent of *drachms or ounces, multiply the number of drachms with* 4, and round off the product.

Reckoning a gramme equal to 15 grains, which is in practice correct enough, we would therefore write instead of ℥ 3 : 2.0 gm.; for ʒ 3 : 4.0; for ʒ½ 3 : 6.0; for ʒ 3 : 8.0; for ℥ 3 : 15.0 (rounded off); for ʒ 3 : 30.0 (instead of 31.1).

2. In prescribing the equivalent of *grains, multiply the latter by* 6 and round off the product, which is the corresponding quantity in *centigrammes*.

3 grains : 3 × 6 = 18, rounded off 20 ctgrm., or 0.20 gm.
4 grains : 4 × 6 = 24, rounded off 25 ctgrm., or 0.25 gm.
10 grains : 10 × 6 = 60 (instead of 66), or 0.60 gm.

The main attention is to be directed to the preservation of the *relative* quantities of the ingredients in a prescription, and besides, to the fact that liquid medicines, if prepared by weight, and dispensed (as they always will be) by measure, must be adjusted in such a manner that the active

ingredient, if its specific weight is much different from that of water, be not prescribed in too large or too small a dose. Of heavy liquids a larger weight, and of light liquids a smaller weight will be required to fill the same measure.

2 fl. ℥ of chloroform weigh nearly 3 ℥ in weight; hence, in prescribing a heavy liquid like chloroform in the metric system, regard must be had to its specific gravity. The same is the case with liquids lighter than water, as for instance spiritus ætheris comp., of which 1 fl. ℥ weighs only about 49 grains.

The capacity of the ordinary domestic measures, as compared with the metric system, is as follows:

A wineglassful is equal to about 3 fl. oz., or 100 gm.

A tablespoonful (½ ℥) corresponds to 15 gm.

A teaspoonful (1 ℥) corresponds to 4 gm.

A teaspoonful of a vegetable powder is about equal to 15 to 20 grains, or 1 to 1.5 gm.; and of a mineral or saline powder about 30 to 40 grains, or 2 to 3 gm.

A noticeable exception is calcined magnesia, which is often prescribed to be measured in such a manner; this substance occupies a bulk about six times as large as an equal weight of sugar: one teaspoonful of the latter weighing 2.0 gm., the same measure of magnesia weighs only about 0.3 gm. (or 5 grains).

It would be easy to multiply rules for the conversion of one system of weights into the other. But there is no need of this. A few weeks of attentive trial of the metric system will give to any practitioner the necessary insight and routine, and after the apparent difficulties have once been mastered, the old system will be gladly dropped into oblivion.

NEW YORK DRUG MARKET.

[Prices given are for round lots from Importers' and Manufacturers' hands. For single packages an advance would be charged.]

Generally speaking, December is a very dull month, probably the dullest of the twelve; but this year, from an accumulation of adverse circumstances, it far exceeds in dulness and lethargy anything that we have known for a long time. The election, instead of settling matters on a more stable basis, has only served to make "confusion worse confounded," and the unsettled condition of political affairs in some of the Southern States makes merchants even more cautious than is their wont. We sincerely hope that before our next issue these troubles will be definitely settled, and according to law; for a much longer continuance of what we have endured for over a month would work serious injury to all branches of business.

Opium has remained quite firm at $6.62½ gold, to which price it advanced soon after our last issue went to press. The prospects of higher prices are becoming more certain, and an active trade would certainly cause a decided advance. Late cables from Smyrna report sales at 193 piasters, being an advance of three piasters since our last.

Morphia. No advance has been made as yet, but the price is very firm at $4.75, sales being moderate at that figure.

Quinia has been advanced twice since our last, manufacturers refusing to sell under $3.00. Some small sales by outside parties have been made at slightly higher prices, but the general quotation is as above.

Quicksilver has stiffened up, and is now quite firm at 57½c. gold, some holders demanding 60c. gold.

Mercurials remain as last quoted. Blue pill 45c.; calomel 75c.; corrosive sublimate 65c.; mercurial ointment 42 @ 52c.; red precipitate 85c.; white precipitate 95c.

Borax is quiet and unchanged, city refined selling at 11 @ 11¼c., California 9¾ @ 10⅜c.

Camphor is higher both here and in China. Purchases in China for this country have been small, and the stocks here are constantly decreasing. City refiners now demand 30¾ @ 31c., at which there is a fair demand for the season.

Blue Vitriol is in moderate demand at reduced figures, 7⅜ @ 7⅝ being the ruling quotations.

Alum sells freely at previous figures, lump 2⅝c., and powdered 3 @ 3⅛c.

Salts are unchanged, Rochelle 30½ @ 31½c., Epsom 2c.

Sugar of Lead. White remains as last quoted, prime brands bringing 19c.; brown, owing to the break in the combination, is weak and nominal at 12 @ 12½c.

Arsenic has been firm, but in moderate demand at 3½ @3⅝c. gold.

Citric Acid dull and lower, manufacturers filling orders at 75 @ 76c. gold, as to quantity.

Tartaric Acid is without change, selling moderately at 42½c. gold for crystals, 47½c. currency for powdered.

Oxalic Acid, the demand has dropped off and prices are slightly easier; for round lots 11¼c. gold would be accepted, 11¼c. gold being the ruling quotation.

Acetic Acid sells moderately at 5¼c. for No. 8.

Cream Tartar shows a slight advance, French selling at 33 @ 33½c. gold, American 31 @ 31½c. gold, powdered American 34½ @ 35c. currency.

Chlorate of Potassium has weakened under a slow demand, and just now prime brands can be had at 23½ @ 24c. gold.

Iodide of Potassium has again been reduced by the manufacturers and is now obtainable at $2.30.

Prussiate of Potassium is weaker and slightly lower figures would be accepted; American yellow is quoted at 25¾c., Scotch 26 @ 26½c.

Bichromate of Potassium is also lower, American selling at 14½c., Scotch 14⅝ @ 15c.

Carbonate of Ammonium is without material change, 10 cask lots bringing 14c., and smaller lots 14½c., both gold.

Muriate of Ammonium is in moderate demand at 10½c. gold, same as last reported.

Sulphate of Ammonium slightly lower, the demand being moderate at 4½ @ 4⅝c. for American.

Iodine, resublimed, remains as last reported, $3.25, at which there is but a slight demand.

Cuttle Fish Bones are dull at 35c., the market remaining as last reported.

Venice Turpentine remains at 24c., there being only a moderate demand at this figure.

Balsam of Copaiba, since our last, has been largely sold to consumers and dealers, and the price forced up to 50 @ 52½c. The demand just now is light, and higher prices are not expected for awhile.

Balsam of Tolu is unchanged, and the demand is moderate at $2.50.

Balsam of Peru has been freely sold and closed higher, $1.50 gold being demanded.

Cubebs are dull and sell as wanted at 9½ @ 10c., an advance since our last.

Cassia Buds dull and nominal at 37½ @ 40c.

Squills show no material change, being still quoted at 9 @ 9½c.

Guarana is higher, owing to reduced stocks; and lump sells at $2.50 @ 2.75; pure powdered $3.

Cochineal has been in active demand, Honduras Silvers having sold at 70 @ 75c. gold, closing firm at the latter price. Cables from London report an equivalent advance there in all descriptions.

Arnica Flowers are quiet at 13½ @ 14c.; being as last reported.

Chamomile Flowers—Roman have again advanced, and at this writing, new crop are held $1 @ $1.25; good old crop 40 @ 50c. German are in fair demand at 25 @ 40c., as to crop and quality.

Giuseng in better supply and lower, $1.15 @ $1.25 being the figures.

Ipecacuanha without material change, prime Rio being quoted at 97½ @ $1.05 gold.

Jamaica Ginger sells moderately at 18½c. for bleached, and 17½c. for unbleached.

Mustard Seed shows no change, English and California yellow selling at 9½c.

Ergot has arrived freely, but under good demand the price has advanced to $1 @ $1.25 as to quality, the latter being for prime new crop.

Gum Assafœtida since last writing has been largely sold, all available parcels being taken up at advanced prices. Some holders ask as high 25c. for prime, but purchases could no doubt be made at less; poor quality is held at 18c.

Aloes—Cape sell readily at 14½ @ 16c., the stock being much reduced. Socotrine are quoted at 30 @ 60c. as to quality.

Glycerine has been advanced by American manufacturers to 21 @ 22c. for refined. Sarg's Vienna sells at 19c. gold. Stocks are light and the demand good.

Castor Oil has sold moderately and at slightly higher prices. Baker's A. A. in cases, 16c.; bbls. 15½c. Western brands have lately been advanced in St. Louis to 15½c. in bbls.; 16c. in cans.

Canary Seed has arrived very largely, and the market is considerably overstocked. Prices are unsettled, but nominal at $2.50 for Smyrna, and $2.75 for Dutch.

Tonqua Beans quoted at 80 @ 85c. for Angostura, at which the demand is moderate.

Essential Oils are generally quiet. Sanderson's Lemon, $2.95; Sanderson's Bergamot, $3.60; Oil Cassia, 87½c.; Oil Anise, $1.45; all gold. Native Oil Citronella, 75c.; Oil Sassafras, 60 @ 65c.; Oil Peppermint in cans, $2.40 @ $2.50. H. G. H. Oil Peppermint, $3.50.

MATERIA MEDICA.

On Cinchona Calisaya var. Ledgeriana.

Mr. Charles Ledger, in 1865, obtained in the Bolivian province of Caupolican some seeds of cinchona, which have been planted in Java and have produced trees of extraordinary richness in alkaloids. The original seeds purchased from Mr. Ledger did not, however, all yield the same valuable variety, and hence the Dutch chemist at Java concludes that they may have been the result of cross-fertilization. It has been found by experiment that hybrids thus formed partake in nearly equal proportions of the chemical characters of their parents, so that it has been possible to judge, from the alkaloids found in the bark, of what two species the plant was the offspring. It has also been shown that there is a tendency in such hybrids to revert to the type of one or other of the parent plants. Hence he concludes that if the Ledger seeds are hybrids, it may be possible, in two or three generations, for this valuable form (C. Ledgeriana) to revert to an original type containing even 20 per cent of quinia.* For present purposes it is necessary to propagate extensively the best trees by cuttings. Singularly enough, it has been found that the C. Ledgeriana, unlike C. succirubra, cannot be propagated by cuttings from the branches, but that if a tree is felled, the shoots which spring from the stumps will strike readily.†

It will naturally be supposed that in this bark, containing $\frac{1}{10}$ to $\frac{1}{8}$ of its weight of quinia, the alkaloids must be visible to the eye; and such is the case. Under a lens the bark is seen to be speckled with white dots, particularly in the cellular portion just outside the liber. That these can be seen in the form of crystalline nodules in a microscopical section, and that the crystals exist in the bark and are not formed by the liquor potassæ, in which the sections are soaked for a minute to remove coloring matter, is strongly asserted by Mr. J. E. Howard, contrary to the opinions of Berg and the authors of the "Pharmacographia." He

* In the report of Mr. Van Gorkom to the Dutch Government upon the progress of the Cinchona plantations in Java, mention is made of a specimen of this variety of bark, which assayed 13.25 per cent. of quinia, equivalent to a yield of 17.86 per cent. of sulphate of quinia.

† This is technically termed "coppicing."

is supported in his opinions by Mr. Broughton, who says that the crystals in red bark are unmistakably those of cinchonidia.—*Pharm. J. and Trans.*, from *Howard's Quinology*.

Note on Goa-Powder.*

A SAMPLE of supposed genuine goa-powder, obtained from Symes & Co., of Liverpool, is described by Mr. Jordan, of Petersburg, as follows: "Goa-powder is a rather light, unequal mixture of fine powder, irregular grains of various sizes, and small splinters of wood, exhibiting a greenish shade. The larger fragments are of a spongy consistence, easily crumbled or broken, and show a lighter, faintly-red color at the fractured surfaces. The small splinters appear bright yellow, with dark points or lines, like the graining of oak. The whole appearance of the mixture shows it to be of purely organic origin, and refutes the supposition, formerly held by some, that it was an artificial compound."

Another sample, obtained from the Pharmacie Centrale at Paris, as Poudre de Goa, appeared as a fine, uniform powder, of the same color as the above-mentioned, only somewhat darker. This was evidently not an original form of the powder, but had undergone pulverization.

The trade-circular of Gehe & Co., in Dresden, of April, 1876, mentions "Cortex" Araroba as source of the "Poudre de Goa, used in the East-Indies as a remedy against herpes." This is most probably a mistake, as all former reports expressly state that the substance is derived from the pith; and this is confirmed by an examination of the larger fragments.—*Pharm. Zeit.*, No. 80.

PHARMACY.

The Local Manufacture of a Cinchona Febrifuge in India.

THE cinchona plantations on the Neilghiris yield practically two barks, red bark and crown. Red bark is rich in total alkaloids, but not very rich in quinia, and the latter is difficult of separation. This bark is of comparatively small value, therefore, to the quinine-maker, although of great value to the government as a source of supply for a cheap febrifuge. Red bark is also of much value in Europe for making galenical preparations (in other words, it is a good druggist's bark), and recently large prices have been got for consignments bought by druggists. These rates are far beyond the value of the quinia contained in such bark, as estimated by a quinine-maker. It is doubtful whether a European alkaloid-maker could, in fact, work red bark for its alkaloids at their present price, and pay for the bark at the rates recently given in London for Neilghiri-grown produce. Crown bark is, on the other hand, rich in crystallizable quinia, and is nearly as highly valued by the quinine-makers as good American yellow. But red-bark trees are by far the most numerous on the government and other plantations in India and the colonies. This species is hardier, grows better, and yields about one-third more bark than the pale or crown bark. The utilization of red bark by manufacture in India is therefore of the highest importance.

The Sikkim plantation consists of red and yellow bark trees. Yellow bark, which has been a failure in the Neilghiris, promises to be a success there. In character, yellow resembles crown bark, but is even more esteemed by the quinine-makers. As both are easy to work, crown and yellow barks would be very much preferable to red bark as sources for the manufacture in India of a cheap febrifuge, if *officinalis* and *calisaya* trees could be got to grow as luxuriantly as *succirubra*.

As the result of a systematic set of experiments, Mr. J. Broughton, government quinologist at the Neilghiri plantation, decided on issuing as "the cheap febrifuge" wanted for India, a preparation called amorphous quinine, which consisted of the total alkaloids of cinchona bark in the form of a non-crystalline powder, mixed to some extent with the resin and red coloring-matter so abundant in red bark. This alkaloid-mixture was accepted by the medical faculty in the Madras Presidency as a remedy in malarious fever, scarcely, if at all, inferior to quinia. Of these alkaloids about six hundred pounds had been manufactured up to the end of the fiscal year 1872–73, when it was found that, after calculating at its manufacturing value the price of the bark used, Mr. Broughton's product cost more than ordinary commercial quinia. The factory has accordingly been closed, and the bark is to be disposed of otherwise than by local manufacture.

The Sikkim (Himalaya) plantations are younger than those on the Neilghiris. No quinologist was appointed to them until the end of the year 1873, when Mr. C. H. Wood was sent out by the Secretary of State. Owing to delays in the arrival of his laboratory apparatus, Mr. Wood was unable to begin work before March, 1874. Some time was necessarily spent in the preliminary work of analyzing the various barks produced on the plantation, with the view of determining the influence of elevation, manure, etc., on them, and also in conducting experiments with the object of settling on the most advantageous mode of manufacturing an efficient febrifuge. Actual manufacture did not therefore begin until 1875.

The method at present in operation in the factory in Sikkim is simple in the extreme, and is as follows:

General Nature of the Process.—The dry bark is crushed into small pieces (but not powdered), and is put into wooden casks, where it is macerated in the cold with very dilute hydrochloric acid. The liquor is then run off into wooden vessels, and mixed with an excess of a strong solution of

* Compare above, pp. 105, 135.

caustic soda; a precipitate forms, which is collected on calico filters, and well washed with water. The precipitate is then dried at a gentle heat and powdered. It constitutes the *crude febrifuge*, which is next submitted to a process of purification. In the latter process a certain weight of the crude product is dissolved in dilute sulphuric acid, and a small quantity of a solution of sulphur in caustic soda is added to the liquor. After the lapse of twenty-four hours, the liquor is carefully filtered, the filtrate is mixed with the caustic soda, and the resulting precipitate collected on calico, washed with a small quantity of water, dried and powdered; it is then ready for issue, and is sent out under the name of "*Cinchona Febrifuge*."

Arrangement of the Factory Sheds.—A position was chosen conveniently near the dry bark godowns, and so situated on the side of the hill that a copious supply of water could be obtained at a level with the roof of the sheds in which the maceration is conducted.

These sheds are rough temporary erections, constructed with saplings, and a mat or thatch roof. Down the centre an open drain is cut to carry off the waste liquor. Over this drain some wooden stands are placed, on which the calico filters rest. The filters are formed by tying a square piece of calico to a wooden frame by the four corners. On each side of the shed is placed a row of twenty-one casks, standing on end upon a stand which elevates them about two feet from the ground. They are empty beer-barrels, which have been purchased from the Commissariat Department at Darjeeling, the head removed, and the cask thoroughly cleansed; a hole is cut in the side of the cask at a level with the bottom, and closed with a cork. In front of the casks a row of tubs, formed by cutting beer-barrels in halves, is placed, so that on uncorking the barrels, the liquor will run out into the tubs.

Outside the shed, at one end, are a couple of large wooden vats at such an elevation that liquid can flow from them along a bamboo trough into any one of the barrels in the shed. The capacity of the large vats, up to a mark on the inside near the top, is accurately determined. Water is run into the vat up to the mark, and a certain quantity of muriatic acid is added, and the whole well mixed. This diluted acid can then be run into any one of the casks in a line with the vat, by means of a bamboo trough. In addition to the macerating sheds, there is a small brick building, heated with charcoal, in which the precipitate is dried; also a separate shed in which the process of purification is conducted.

Method of Conducting the Process.—The casks are worked in sets of three, and are marked A. B. C.

In each shed there are fourteen sets, seven on each side. Each cask receives one maund (= 37½ kilos) of dry bark, which undergoes four successive macerations, the liquor being moved in rotation through the three casks. Each maceration lasts half a week. The liquid used for the fourth and last maceration is acidulated water drawn from the vat. When this is run off, it is moved into the next cask to form the third liquor. When this is drawn off, it forms the second liquor for another cask, and, when transferred from that, it goes on to new bark, from which it is drawn off and precipitated. Of course, in starting a new shed, every cask contains dry bark, consequently the system of rotation is not brought into full operation until after the first fortnight; and it is only after the shed has been in operation for three and a half weeks that the liquor for precipitation has been used for four macerations.

The liquor which is to be precipitated is now run into the tubs. The other liquors are drawn into wooden buckets and poured into the proper casks. The new acid is then drawn from the vats. The diluted acid is made in the vat by adding one gallon of muriatic acid to every one hundred gallons of water.

The weight of acid used in the exhaustion is 6½ per cent. of the weight of dry bark. It is obtained from Mr. Waldie's chemical works, at a cost of 3½ annas (8 annas=1 shilling Engl.) per pound in Calcutta.

To precipitate the saturated liquor, a solution of caustic soda is added in excess. The caustic soda is obtained from England in 5-cwt. drums, costing from £15 to £20 per ton in London. One part of this is dissolved in three parts of water, and the solution stored in iron vessels. The quantity to be added to the bark liquor must be judged of by the appearance produced. When a sufficient quantity has been introduced, the precipitate assumes a somewhat curdy condition.

About 6½ pounds of solid soda are used for every 100 pounds of dry bark.

The filtration is not commenced until the following day, when the liquor is transferred to the calico strainers, which have been well wetted. The first portions that run through are returned until the liquid passes of a bright ruby color; it is then allowed to flow away by the drain. After all the liquor has drained off, water is passed through the precipitate until it ceases to acquire a red tint. The alkaloids on the filter should then be of a uniform cream color. The precipitate is now dried and reduced to a fine powder, which is stored in suitable bins. It constitutes the crude febrifuge.

The Process of Purification.—The precipitate during the act of drying acquires a slightly reddish brown color. It is therefore submitted to a process of purification. Fourteen gallons of water are mixed with two pints of sulphuric acid, and twenty pounds of the dry powder are introduced. The alkaloids dissolve, and a quantity of coloring matter remains insoluble. About half a pint of a solution of sulphur in caustic soda is now stirred in, and the whole allowed to stand for twenty-four hours. It is then filtered through calico into a clean vessel, care being taken to get the liquor perfectly bright. About six gallons of water are used to wash the sediment left on the filters. The clear filtrate is thoroughly mixed with solu-

tion of soda to precipitate the alkaloids; the precipitate is collected on calico, washed with a small quantity of water, drained, dried, and reduced to fine powder; it is then ready for issue.

Wooden tubs are used for this process, but they are not so well suited for the purpose as enamelled iron or earthenware. The purification is conducted in a separate shed by a man who is confined to that work.

The Labor employed.—The only workmen employed in the factory are Nepaulese coolies. When the process is once brought into full operation, it is found that these men readily master every detail, and conduct the whole thing with all the care and accuracy that is required. But, of course, the factory is under the supervision of Mr. Gammie, the officer in charge of the plantation, who visits it once a day, and sees that the work is being properly performed.

The Bark used.—Dry *succirubra* bark only is employed. Moreover, care is taken to mix the root, stem, and branch bark together in as nearly as possible the proportions in which they are yielded by the plantations. This mixture is broken into small pieces, and a maund of it goes into each cask. This is done to insure uniformity of composition in the product. Green bark is never operated on. It will be seen that the arrangement of the process requires that a certain weight of bark should be put into the casks every week throughout the year. This could not be done with green bark, because bark is only taken from the trees twice per annum. Apart from this, however, it has been found that dry bark yields a much better product, and quite as large a quantity. The small cost of drying the bark is more than counterbalanced by the advantages gained.

Temporary Object of the Process.—It must be remembered that this method has only been adopted to furnish a large supply of febrifuge for trial; it does not profess to make the most economical use possible of the bark. The factory is estimated to turn out during the present financial year 4,800 pounds of febrifuge, which, at a rupee an ounce, will pay the whole cost of the plantations and manufacture for the year. If the product proves to be of permanent value as a remedial agent, it is probable that the process will be considerably modified to produce greater economy, but involving the use of permanent buildings and machinery.—From *Geo. King's Manual of Cinchona Cultivation.*

On an Officinal Multiple Antidote.

In the fourth volume published under the auspices of the *Société de Médecine Légale de France*, is an important article on the above subject by Dr. Jeannel. In it he endeavors to answer the question: Is it possible to prepare an agent which shall be officinal, that is, susceptible of indefinite preservation, capable of neutralizing chemically all poisons in the stomach or in the intestine, or at least of transforming them into compounds relatively inoffensive, and then determining their prompt evacuation? He discusses the applicability of the agents suggested by Dorvault for this purpose, pointing out what appears to him to be the excellences and defects of each, and finally proposes the following:

	Grammes.
Solution of ferric sulphate, s. g. 1.45	100
Water	800
Calcined magnesia	80
Washed animal charcoal	40

Let the solution of ferric sulphate be kept in a bottle by itself, and the magnesia and charcoal mixed with the water in another bottle. When required, pour the ferric solution into the other bottle and shake violently. The mixture should be given repeatedly in doses of 50 to 100 grammes.

According to Jeannel's experiment, this antidote, employed in suitable proportions, renders completely insoluble the preparations of arsenic, zinc, and digitaline, but not the oxide of copper. It leaves in solution notable quantities of mercuric oxide and appreciable quantities of morphia and strychnia, and does not decompose or precipitate either the cyanide of mercury or tartar emetic. It completely saturates free iodine, but acts only partially on solution of the alkaline hypochlorites.—*Chem. and Drug.*

Mercuric Peptone as a Substitute for the proposed Mercuric Albuminate.

Albuminate of mercury was introduced into medical practice not quite one year ago, and it appears to have already found a substitute in the so-called "Mercuric Peptone." Prof. H. v. Bamberger,* who originated the albuminate, found that it was not merely difficult to prepare a clear and pure solution of this compound, but that it was moreover rather liable to spoil by keeping. He therefore replaced the albumen by a substance nearly related to it, namely, peptone. This latter body is easily soluble in water, resists the effects of heat, alkalies and salts, may be easily filtered, and forms a compound with mercury without difficulty. To prepare the latter, it is necessary to first make a solution of mercuric chloride (corrosive sublimate) of exactly five per cent., and a solution of sodium chloride of twenty per cent., One gramme of meat-peptone is dissolved in 50 c.c. of water, and 20 c.c. of the mercuric chloride solution are added. This produces a cloudiness, which is removed by the further addition of 15–16 c.c. of the sodium chloride solution. The finished liquid contains one per cent. of mercuric peptone. The results of all trials which have thus far been made with this preparation are very satisfactory.—*Pharm. Zeit.*

The Manufacture of Milk-Sugar in Switzerland.

In a communication to the *Schweizer Wochenschrift f. Pharmacie* of October 20th, Mr. A. Sauter gives an account of a visit to Marbach, in the canton of Luzern, Switzerland, where a half-dozen refiners are said to make a handsome income from the manufacture of milk-sugar.

* See above, pp. 167, 175.

The raw material used for the recrystallization comes from the neighboring alps, in the cantons of Luzern, Bern, Schwyz, etc.; a considerable quantity is supplied also by Gruyères. It is the so-called "Schottensand," or "Zuckersand," the French "déchet de lait," obtained by simple evaporation of the whey after cheese-making. Notwithstanding a continued rise in the price, consequent upon the demand and increased cost of labor and fuel, the manufacture continually expands, and now amounts to 1,800 to 2,000 cwt. yearly, corresponding to a gross value of about 300,000 francs, certainly a handsome sum for a small mountain village with but few inhabitants.

The manufacture is only carried on in the higher mountains, because there the material can no longer be used profitably for the fattening of swine, which are found chiefly in the valleys, and the wood required for the evaporating process is cheaper in the highlands.

The crude material is sent to the manufacturer or refiner, in sacks containing one or two hundredweight. It is washed in copper vessels, and dissolved to saturation at the boiling temperature over a fire, and the yellow-brown liquor, after straining, is allowed to stand in copper-lined tubs or long troughs to crystallize. The sugar crystals form in clusters on immersed chips of wood, and these are the most pure, and therefore of rather greater commercial value than the milk-sugar in plates, which is deposited on the sides of the vessels.

In ten to fourteen days, the process of crystallization has ended, and the milk-sugar has finished growing ("*ist ausgewachsen*"). The crystals are then washed with cold water, afterwards dried in a cauldron over a fire, and packed in casks holding four to five hundred-weight.

As the "Schottensand" can only be obtained in the summer, the recrystallization is not carried on in the winter, hence a popular saying that the milk-sugar does not "grow" in the winter. The entire manipulation is carried on in a very primitive manner, it being a matter of astonishment to find a specific gravity instrument in any place. The author is of opinion that with a more rational method of working, a whiter and finer quality of milk-sugar could be produced.—*Pharm. J. and Trans.*, November 11.

The Alkaloid contained in Jaborandi.

In 1875 an alkaloid was isolated from the leaves and stalks of jaborandi (*Pilocarpus pennatifolius*, Lemaire), almost simultaneously and quite independently by Mr. A. W. Gerrard and M. Hardy. There is another kind of jaborandi, a species of *Piper*, from which Parodi has isolated an alkaloid of the formula $C_{20}H_{12}N_2O_6$.

To the alkaloid upon which Mr. Gerrard worked, the name of *pilocarpine* has been given. He has detailed the methods of extraction, and states that it forms crystallizable salts with hydrochloric, nitric and sulphuric acids.* He further exhibited some crystals of the so-called hydrochloride (or hydrochlorate) in a dark brown mother-liquor, at the last meeting of the Pharmaceutical Conference, but neither at that time nor since has he, or Mr. Hardy, or any other observer, published any formulæ for the alkaloid or its compounds. Mr. Gerrard has further stated his opinion that there are at least two alkaloids in jaborandi, and that the one upon which he worked gave no precipitate with phosphomolybdic acid.†

More recently Hardy stated that he has obtained, from the distillate of an aqueous extract of the leaves of jaborandi, a quantity of crude oil, containing a terpene which gave a crystalline dihydrochloride. But the boiling point of 178° C., which he attributes to the hydrocarbon, would rather point to cymene than to a terpene. He also obtained a solid, colorless substance, which was not further examined.‡ Mr. Chas. T. Kingzett, who had also examined the alkaloid and had been unable to obtain any crystalline salts, expressed some doubts as to the correctness of Mr. Gerrard's results, and subjected the matter to a new investigation. His first experiment was conducted upon the leaves of jaborandi. These were thoroughly extracted with water of 70° C., the extract concentrated to a small bulk, filtered from deposited matters, rendered acid by hydrochloric acid, and fully precipitated with phosphomolybdic acid. The bright yellow precipitate, after thorough washing, was decomposed after the method of Sonnenschein, that is, with excess of baryta, and the excess of baryta was removed by carbonic acid. The filtrate was strongly alkaline, and was found to contain barium. This barium was carefully removed by sulphuric acid, and the filtrate, which gave the characteristic reactions of an alkaloid with various reagents, was converted into hydrochloride; but all attempts to obtain crystals by concentration on a water-bath, or in a vacuum over sulphuric acid, or by spontaneous evaporation, proved vain.

In the next experiment he took the stems and twigs of jaborandi, and extracted them after they had been cut into small fragments, with boiling water, until the last extract contained no appreciable quantity of matter.

The extract was distilled to a small bulk, and it was observed that the first few litres of distillate came over milky, and that on standing yellow drops deposited. The small quantity and its volatile nature defeated an attempt made to isolate it. The concentrated water-extract obtained as above was treated with an equal volume of strong alcohol, which threw down dark-colored albuminous matter. From the filtrate the whole of the alcohol was distilled off, and a great part of the water. The syrup of 300 c.c. was now extracted with much

* See Mr. Gerrard's paper in our November number, page 331.

† Compare *Year Book of Pharmacy*, 1875.

‡ *L'Union Pharmaceutique*, xvi., 365.

ether. Next ammonia was added, as Mr. Gerrard had stated in a letter to Mr. Kingzett, that he had found the alkaloid in the water-extract to be combined with an acid, and the whole was again extracted with ether. Finally, the syrup containing ammonia was extracted with chloroform.

The first ether extracts were strongly colored; the last ones faintly; those with chloroform not at all. From all these extracts the solvents were distilled, and after many and various unsuccessful attempts to get the residues separately into a crystalline form with hydrochloric acid—no sign of crystallization ever being observed—all the products were united, ammonia added, and the whole again extracted by chloroform. This left, on distillation, a colored aqueous syrup, which was rendered strongly acid with nitric acid, and gave a bulky yellow precipitate with phosphomolybdic acid. This precipitate was passed through the same treatment as stated above. The free base was again found to contain barium, which was removed exactly by very dilute sulphuric acid, after which the whole was concentrated to a syrup, which had a pleasant nutty odor. The product was now acidified faintly with hydrochloric acid, and another attempt made to get a crystallization, both by evaporation on a water-bath and in vacuo, etc., but as before, quite in vain.*

The hydrochloric acid was therefore removed by dilution with water and agitation with oxide of silver, and the filtrate evaporated to dryness, after digestion with charcoal, which removed much of the color. The residue was dissolved in absolute alcohol, filtered from a trace of reduced silver, and again evaporated to dryness, the drying being completed in an air-pump over sulphuric acid during a fortnight. The product was now analyzed, all combustions being effected in platinum boats, as the matter was soft and plastic, like gum. The results of the combustion led to the formula $C_{29}H_{11}N_2O_4 4H_2O$ for the alkaloid in vacuo.—*Journ. Chem. Soc.*, Oct., p. 367.

THERAPEUTICS.

Coto Bark and Cotoïn.

THE extraordinary powers ascribed to this comparatively new remedy, in arresting and curing intestinal catarrh, dysentery, and diarrhœa, in their various modifications, appear to have received renewed confirmation through the experiments made with it by Drs. Burkart and Rieker in the Ludwig's Hospital at Stuttgart.† The remedy was employed by them in the shape of powder, as tincture, and in the form of the active principle, cotoïn. The powdered bark, when placed on the tongue, has a sharp aromatic taste, which soon increases in intensity, and becomes very disagreeable. It increases the flow of saliva, and its effect is felt for some time after it has been removed from the mouth. Doses of 0.5 gm., given internally, generally produce a burning sensation in the stomach, and very generally eructations and vomiting, making this form of exhibition undesirable. Nevertheless, in one case, where the patient retained a single dose of 0.6 gm. (9.2 grains), all gastric catarrh disappeared in two days. The effects of the tincture (1:9) are even more disagreeable than those of the powdered bark itself; it is very difficult to make patients take the remedy after they have once experienced its unpleasant effects. These latter, however, are mainly caused by constituents of a resinous character, as well as by an essential oil, in which the peculiar specific action of the remedy is not believed to reside. The employment of the active principle, cotoïn, therefore removes all obstacles which might otherwise cause the rejection of the remedy. In the first place, only very small doses are necessary to produce the desired effect, and besides no secondary disturbances of any kind, nor any disagreeable sensations are produced by it. According to the investigations of Jobst, cotoïn must be classed to the so-called indifferent principles; and it is not only "indifferent" chemically, but even physiologically; for on administering it to animals, not the slightest change of any physiological functions could be observed, even in doses of 1 gramme. This absence of toxic effects is no doubt a great advantage, in comparison with those remedies upon which we mostly rely in such diseases, namely, opium and lead. Although cotoïn may seem to be much more expensive than any other antidiarrhœic remedy, it is not so in reality, for only very small and infrequent doses of it need be employed.* Eleven cases of gastric catarrh and diarrhœa have been treated with the remedy, of which 0.05–0.08 gm. were dissolved in 120 gm. of distilled water, to which 10 drops of alcohol were added, and the solution mixed with 30 gm. of syrup. A tablespoonful was administered hourly. Some of the cases were of old standing, some were very severe attacks of cholera morbus, and a number of them had either been but little benefited by opium, tannin, or lead acetate, or not been bettered at all. The above mixture produced speedy improvement, generally in a few hours, and complete recovery in from 12 hours to 6 days.—*Buchn. Repert. f. Ph.*, 1876, 520.

Linné's Monument, for which the necessary funds have already been contributed, will be erected in Stockholm, and it is intended to unveil it on January 10, 1878, being the centennial anniversary of his death.

* In the January number will be found an account of the effects of chlorhydrate of pilocarpine, which was procured from E. Merck in the form of a *white crystalline salt*.

† On the chemistry and properties of coto bark, see above, pp. 39, 104.

* Mr. Jul. Jobst has informed the author that a considerable supply of coto bark has lately reached London, which was at once purchased by him, so that both the bark and cotoïn will probably shortly appear in the market.

RECENT PAPERS.

Zeitschrift d. Oester. Apoth. Vereins. Nos. 29, 30.

DR. RICH. GODEFFROY: "Review of the most important modes of formation, methods of preparation, properties, and reactions of carbolic, benzoic, salicylic, etc., acids." [In our last number we gave the author's list of reactions for carbolic acid (p. 343); we now give the principal

REACTIONS FOR BENZOIC ACID.

1. On passing the vapor of benzoic acid over faintly ignited zinc-powder, *essential oil of bitter almonds* is formed (Baeyer).

2. Benzoic acid, heated in a retort with coarsely ground pumice-stone, splits into *benzol* and carbonic acid. If overheated, carbon is separated and naphthalin and pyrogenic oils are formed (Barreswil and Boudault).

3. On heating benzoic acid with a mixture of acid sodium sulphate and sodium chloride to 200° C., there are formed *benzoyl chloride*, hydrochloric acid, and normal sodium sulphate (Beketoff).

4. Benzoic acid is soluble in solution of sodium phosphates, which give up to it 1 or 2 atoms of sodium, producing thereby *sodium benzoate*. The solutions have an acid reaction, but give up benzoic acid on evaporation or to ether (J. Donath).

5. On mixing 3 mol. of benzoic acid with 1 mol. of glucose, and heating with a large excess of strong sulphuric acid, the liquid assumes a fine *blood-red* color, which disappears after a while; finally the mass turns brown and black.

6. Aqueous chromic acid or potassium chromate and sulphuric acid do not alter benzoic acid, no odor of oil of bitter almonds is developed, and the chromic acid is not reduced (distinction from cinnamic acid).

7. A neutral solution of ferric chloride produces in neutral solutions of benzoates a flesh-colored precipitate of *ferric benzoate* ($Fe_2 6C_7H_5O_2$), insoluble in water and acetic acid, but decomposed by hydrochloric acid, which produces free benzoic acid and ferric chloride.

8. Silver nitrate produces no precipitate in a solution of benzoic acid; but on saturating the free acid with ammonia a white crystalline precipitate of *silver benzoate* is immediately produced. This is soluble in ammonia, acetic acid and hot water.

9. Mercurous nitrate produces in a solution of benzoic acid a white crystalline precipitate of *mercurous benzoate*, very difficultly soluble in water. Alkaline benzoates produce a voluminous non-crystalline precipitate.

The remainder of the reactions quoted are not so well applicable in practice.]

Pharmaceutical Journal and Trans. Nos. 331–334.

W. DYMOCK: "Notes on Indian Drugs." [*Coleus aromaticus*, local name Owa (properly the name of *Ptychotis Ajowan*, D. C., Pharm. Ind.); used as a carminative and stimulant.—*Zingiber macrostachyum*, local, Neesun; valuable stimulant and stomachic.—*Cassia Tora*, local, Takla; leaves are used as a poultice, and internally as a purgative.—*Crataeva religiosa*, local, Vaivarna; stomachic and tonic.]

THOS. GREENISH: "An Improved Method for making Mistura Guaiaci and similar Mixtures." [From this paper we quote the author's process for preparing emulsions containing resins, such as resin of copaiva. He recommends to rub the resin with *sugar of milk*, then to add alcohol and to produce a homogeneous mixture by trituration; to this is to be added powdered gum arabic, the trituration to be continued, and the water gradually added. A proper formula would be the following:

Resinæ Copaivæ	ʒ jss.
Sacchar. Lactis	
Spir. Vini Rect.	ãã ʒ iij.
Pulv. Acaciæ	ʒ v.
Aquæ	ad. ℥ vj. M.

BALMANNO SQUIRE: "Glycerole of Nitrate of Bismuth." [The author, being surgeon to the British Hospital for Diseases of the Skin, and desiring to employ a solution of a simple bismuth salt in certain skin diseases, tried glycerine as a solvent, and found that the nitrate was *freely soluble* in glycerine, and that it dissolved without decomposition. This solution may even be diluted with water, without depositing any more than a trifle of the salt for nearly an hour.]

J. R. JACKSON: "Chickle Gum and Monesia Bark." [A peculiar gum or gum-resin called "Chicle" is imported into New York from Mexico for manufacturing purposes, such as mixing with rubber for insulating telegraph cables. It has also been tried as a coating for the bottoms of vessels, and yields besides an aromatic oil adapted for perfumery. It looks like crude gutta percha, but is more brittle and friable. It is also known as "Mexican Gum" or "Rubber Juice." The plant yielding this substance is known as zapota or zapote, is described as a sapotaceous tree, and yields a medicinal product called monesia. But whether this monesia is the same substance as that known for many years under this name, cannot be decided for the present, although it is highly probable. The substance monesia, which has been common in our market (cf. U. S. Dispensat., part III.), is known in Brazil under the names buranhem, guaranhem, imiracem, mohica, and cusca doce (sweet bark), and is derived from *Chrysophyllum glycyphlæum*, Cazar.]

Pharm. Zeitung f. Russland. No. 20.

ED. RENNARD: "On Liquorice from Asia Minor." [The author examined a specimen of liquorice, obtained directly from Asia Minor, and agreeing entirely in composition with that described as "Italian" (see above, p. 262); the latter is therefore most probably derived from the same source.]

The Analyst. October.

ALF. H. ALLEN: "On the Solution of difficultly-soluble Substances." [Recommending to treat refractory substances by fusing them with acid potassium sulphate. This is not new, but is not as commonly employed as it might be.]

CHAS. HEISCH: "On the Composition of Different Kinds of Cocoa (Cacao)." [From the author's table of the percentage composition of various kinds of cacao beans, deprived of the husk, we quote the percentages of fat or cacao-butter: Cuba, 45.3; Grenada, 45.6; Caracas, 48.4; Trinidad, 49.4; Guayaquil, 49.8; Bahia, 50.3; Para, 54.0; Surinam, 54.4 per cent.]

Pharm. Centralhalle. Nos. 41–43.

A. GAWALOWSKI: "On Petroleum Illumination." [The author examined a number of mineral oils, viz., 24 samples of American, 13 of Hungarian petroleum, 1 sample "Pensilvania Oil," and 1 of "Mineral Colza Oil" of the Eclipse Lubricating Company of Franklin, Pa. He found all the American oils to have the flashing point over 100° F., therefore all safe, while all the Hungarian oils had lower flashing points. But the "Mineral Colza Oil" was found to be so much superior to all others, that a great future may be predicted for it.]

Berichte der Deutschen Chem. Gesellschaft. No. 15.

ALB. FITZ: "On the Fermentation of Glycerin." [Redtenbacher (1846) and Berthelot (1856) found that glycerine could be made to undergo fermentation lasting through several months, by mixing it with water and beer-yeast, or with water, chalk, and caseïn. The author has made renewed investigations on this subject, and finds that a mixture consisting of 2,000 parts water, 100 of pure glycerine, 1 of calcium phosphate, 0.5 of magnesium sulphate, 2 of pepsin (added as food, not as ferment), and 20 of calcium carbonate—after addition of a particular ferment (schizomyceten), and by keeping at the constant temperature of 40° C. undergoes energetic fermentation, which is completed in 10 days. The results are: carbonic acid, hydrogen, normal butylic alcohol, normal butyric acid, small quantities of ethylic alcohol, and a higher fatty acid, probably caproic acid.]

R. FASSBENDER: "Note on the Fluorescent Body in Atropa Belladonna." [All portions of this plant contain, according to Richter, a highly fluorescent body, which may be obtained from even a small portion of the plant. Two

unripe berries treated with water and afterwards with alcohol, the coloring matter absorbed by animal charcoal, and the latter digested with alcohol and a few drops of ammonia, yielded a liquid which, when diluted to as much as 200 c.c., still exhibited a distinct blue fluorescence.]

The Pharmacist. Oct., Nov.

L. C. HOGAN: "Pharmacal Notes." [The author recommends to prepare *Syrup of Rhubarb* as follows:

Fluid Extract of Rhubarb..... 3 fl. oz.
Water of Ammonia; Water, of each, q. s.
Sugar.....24 troy oz.

Mix the fluid extract with sufficient water to make one pint; let stand till resinous matter has all precipitated; then add enough ammonia water to dissolve the precipitate. Add the sugar and dissolve with a gentle heat. He also recommends to add 2 fl. oz. of water of ammonia of 18 per cent. to the menstruum for making the pharmacopœial quantity of *aromatic syrup of rhubarb*, in order to obtain a clear and bright product.]—"Velpeau's Diarrhœa Mixture," "Haarlem Oil," and "Carbolate of Iodine," see page 372.

R. ROTHER: "Elixir Aurantii Comp. Ph. G." [This "elixir," which is also known under the name of Hoffmann's Stomachic Elixir, or Hoffmann's Magen-Tropfen," should be prepared, according to the author, after the following more rational formula: Orange peel, coarsely ground, 12 ℥; gentian root, wormwood leaf, buckbean leaf, each, coarsely ground, 4 ℥; cinnamon, cascarilla, each, in fine powder, 4 ℥; potassium carbonate, 2 ℥; alcohol and water, q. s. Mix one measure of alcohol and two measures of water, then mix all the other ingredients, excepting the potass. carb., and incorporate one pint of the menstruum; pack this mixture moderately firm into a glass percolator, and pour on menstruum until 8 pints of percolate have passed; to this add the potass. carb., set the mixture aside for 24 hours, and finally filter.]

H. HILDEBRAND: "Note on Extemporaneous Pill-Coating." [The author recommends to moisten the finished pills, which must be hard and round, with syrup diluted with one-fourth of water, and then to roll them about with the fingers in a rather large quantity of finely powdered elm-bark. They are either put in a warm place to dry, or, if to be delivered at once, are put into a box containing some loose powdered bark. This coating makes them exceedingly slippery, and is highly efficient.]

Neues Repertorium f. Pharmacie. 8 and 9.

F. A. FLÜCKIGER: "Easter Vacation in Liguria." [Prof. Flückiger sends a long communication, descriptive of botanical curiosities which he has met with in his excursions. We shall probably have occasion to refer to portions of it hereafter.]

DR. BURKART: "Coto-Bark and Cotoïn" (see p. 360).

RUD. V. WAGNER: "The German Chemical Industry at the Centennial in Philadelphia." [We give in the following a translation of such portions of Prof. v. Wagner's paper as are thought to be of particular interest for American chemists and pharmacists.

"When the invitation to participate in the proposed exhibition at Philadelphia in 1876 reached the manufacturing chemists of Germany, it was apparent that there was considerable reluctance to accept the proposal, chiefly on account of the inability of foreign manufacturers to compete with Americans in their own market, in consequence of their protective system, which has been more or less in vogue ever since the time of Washington. Nevertheless, a number of leading manufacturers considered it incumbent upon themselves to put in an appearance, and to offer the best they could produce to the inspection and judgment of visitors and jury. While the German chemical exhibit at Philadelphia could not, therefore, give a true picture of the extent and importance of German manufacture in general, all competent critics nevertheless acknowledged it to be one of the ornaments of German industry, and, indeed, to be one of the greatest attractions of the whole exhibition . . . The fact that the arrangement of the German chemical exhibition was highly defective, in some cases to the direct prejudice of the exhibitor, was much to be regretted, and proved that the officials having charge of this particular duty either were inexcusably careless or utterly incompetent. Having been appointed by the Imperial German Commission as one of the judges in the group of Chemistry, and the judges having completed their labors, I am justified in giving free expression to my opinion on the chemical industry of Germany at the Centennial. My task is indeed an easy one, as the impression produced upon my mind, by the comparison of the chemical products of Germany with those of other countries represented there, was in general quite satisfactory, "in spite of some dark spots," and justified the best hopes for the future. (Now follows a description and criticism of the German exhibits, which the reader is no doubt already familiar with.) Before closing my report, I must make mention of the visitors who inspected the products of German labor and industry. Indeed, it is not without interest for the German exhibitor to learn what class of people criticised his displays. . . The most important portion of the visitors were without doubt the representatives of the American press, and I am pleased to be able to state that the most influential papers of New York, Philadelphia, Boston, Washington, Baltimore, and Chicago, expressed themselves in very favorable, I may even say flattering terms on this part of the exhibition. However, there were not wanting pointed remarks and criticisms—not unmerited, I must confess—on the defective manner of arrangement. Regarding the visiting public at the exhibition, I am justified in saying that in quality it was excellent. Most young people appeared to visit the exhibition with a desire to learn. In Paris, upon the Champ de Mars, and more yet in Vienna, upon the Prater, the interest of visitors was concentrated in the halls of fine art, and in the departments for arts and history of labor. The departments of machinery, mining, textile fabrics, chemistry, and generally of everything practical and useful were left to the inspection of the specialist or juror. While even on the best days the number of visitors in the chemical department at Vienna could easily be counted, in the Philadelphia exhibition the passages in and around the American Department, between 10 and 5 o'clock, were frequently overfilled. For the first time upon an international exhibition could it be noticed with satisfaction that the visiting ladies, young and old, frequented the departments of practical and useful arts, and endeavored to thoroughly instruct themselves. The desire for information on the part of the visitors, and their deep interest in everything of a practical and profitable nature, are characteristic of this exhibition. . . Most of the visitors were of course Americans, from all the States and Territories of the vast Union, from Mexico, Central America, the Antilles, and especially numerous from Brazil. . . The German Empire unfortunately was but scantily represented, but few deeming it worth while to cross the ocean for this purpose. This is highly to be deplored, since American industry is very much undervalued in many German circles."]

Pharmaceutische Zeitung. Nos. 88-92.

HOLTZ: "Report on the Centennial Exhibition," made at a meeting of the Berlin Apothecaries' Society, on Oct. 24th. [After some general remarks on the exhibition, and an expression of regret on the bad arrangement of the German exhibits, owing to the want of skill or ability on the part of those to whom this task had been assigned by the German Commission, Mr. Holtz gives a review of American chemical and pharmaceutical exhibits, in highly flattering terms. Particularly are noticed: Dr. Squibb; Powers & Weightman; Rosengarten & Sons; Chas. Pfizer & Co.; McKesson & Robbins; Fred. Stearns; John Wyeth & Co.; Page, Kidder & Fletcher; Harrison Bros.; Chas. Lennig; Geo. White, and others.]

ED. "Silphium Cyrenaïcum." [This "remedy," which we have already made mention of on page 275, has been ascertained to be Thapsia garganica, the *boundfa* of the Arabs.]

XAV. LANDERER: "A Popular Oriental Remedy against Toothache." [The oil of Thymus Thymbræ, which is used either in the form of oil, or by chewing the fresh leaves, is, according to Prof. Landerer, one of the promptest remedies against toothache known.]

NEW BOOKS.

Duplais (Aîné, P.). Traité de la Fabrication des Liqueurs et de la Distillation des Alcools. 4e éd., vol. i., pp. 556. Paris.

Farsky (E.). Verbindungen der Salicylsäure mit den Eiweisskörpern. 8vo. Wien.

Schelenz (H. E.). Pharmakognostische Karte zur Pharmacopœa Germanica. Halle.

Hanke (Phil.). Leitfaden zur Vorbereitung auf die Preussische Apotheker-Gehilfen Prüfung. 2 parts. Leipzig.

Staedel (W.). Jahresbericht über die Fortschritte auf dem Gebiete der reinen Chemie. For 1875. 8vo. Tübingen.

Liebig (J. v.). Die Chemie in ihrer Anwendung auf Agrikultur und Physiologie. 9te Aufl. Herausg. von Ph. Zoeller. 8vo. Braunschweig.

Bronner (P.). Die Essigfabrikation. 8vo. Braunschweig.

ORIGINAL COMMUNICATIONS.

THE REVISION OF THE UNITED STATES PHARMACOPŒIA.

THIS subject had been selected as a theme for discussion at the Conversational Meeting of the College of Pharmacy of the City of New York, held on Thursday, November 23d, and as we deem the subject of paramount importance for the members of both the pharmaceutical and medical professions, many of whom still hold vague and undecided views as to the most appropriate method of revising the work, we have thought it best to report the principal discussion in full.

The President, Mr. PAUL BALLUFF, having called the meeting to order, opened the proceedings with some introductory remarks, in the course of which he referred to the discussion of this subject at the late meeting of the American Pharmaceutical Association,* and stated that in his opinion the proposed conference or council of the two professions should be arranged upon the basis of equality in numbers of representatives from either side.

DR. E. R. SQUIBB then addressed the meeting as follows:

MR. PRESIDENT AND GENTLEMEN—In discussing the subject before us, the first question we have to ask ourselves is, do we wish to change the plan of revising the Pharmacopœia? We have had an excellent Pharmacopœia up to the last revision—perhaps inferior to none in its general character, certainly inferior to none in the labor, whether of skilfulness or amount, that has been bestowed upon it. The reason why we have had so good a Pharmacopœia is because we have had such competent authority to control it. The relations between the U. S. Pharmacopœia and the U. S. Dispensatory have been of such a character as to give to both books a world-wide reputation, and that reputation is a combined one; that is, the reputation of the Pharmacopœia cannot be separated from the reputation of the Dispensatory. This is so because the authors of the Dispensatory were mainly concerned in the production of the Pharmacopœia. It has been supposed that the labor on the U. S. Pharmacopœia was unpaid or voluntary labor. Now that labor was voluntary only in one sense, and that is in the sense that the authors of the U. S. Dispensatory gave their labor to the Pharmacopœia, with the effect at least of giving sale and giving authority to the Dispensatory, which was based upon it, and which has been one of the most successful medical books, in its financial results, ever published; and those results were reached through the Pharmacopœia as the authoritative basis for the work. The Dispensatory embraces a great deal of information besides the two Pharmacopœias it contains, and has been regarded as a commentary in a general medical sense; hence the sale of the Dispensatory has overshadowed that of the Pharmacopœia. Until within the last twenty years probably, the Pharmacopœia was but little known, while the Dispensatory was a book which was widely known and appreciated. It embraces the text of the Pharmacopœia, as no other book could do, because the copyright was held by the authors of the Dispensatory, who were at the same time mainly the authors of the U. S. Pharmacopœia, and they were paid for their labors upon the latter by the financial success which attended the publication of the Dispensatory. Now, had this relation between these two books gone on undisturbed, as it was twenty years ago, I would be the last to disturb that relation. I do not think that the authors who gave us so good a Dispensatory and Pharmacopœia received more honor and profit than they were entitled to for their labors. Unfortunately, however, for both medicine and pharmacy, Dr. Bache died in 1864, and the Dispensatory lost his services. Very soon after, Dr. Wood became so infirm, from age and disease, that he was unable to keep up the Dispensatory, and in 1865 he announced that he would not be likely to participate in another revision. He served upon the last revision of the Pharmacopœia, but since that time, 1865, the Dispensatory has had no additions made to it, has undergone no revision, and has not been brought up to the present condition of medicine and pharmacy. The true reason why our last revision was so unsuccessful, and probably the only reason why we are now left to desire a change, if we do desire one, is because it is so constructed as to require a Dispensatory, and is now without one. Twenty years ago the Pharmacopœia was almost universally confused with its commentary, the Dispensatory. Now we are left without a Dispensatory, and for the first time the Pharmacopœia has been left to stand alone, or rather is left to support itself with the influence of the Dispensatory against it, because the Dispensatory is now a commentary on the past revision and ignores the present one. The reason why we have not a better Pharmacopœia now is, that the labor involved was so great that no man or set of men should have been asked to perform it unpaid. The Committee did not only all that could be reasonably expected of them, but far more than they could afford to do. Their labors were contributed from time to time, and much more labor was performed than any one had a right to ask of the Committee under the circumstances. Let us not permit ourselves to complain that the work was not better done, but let us be thankful that it was done so well, and simply inquire now whether it can probably be improved. Drs. Wood and Bache were abundantly paid for their labor by the sale of their Dispensatory, and could afford to do it well, but they are not now available. It is hardly possible to go on in the manner originally designed, of making the Dispensatory serve all purposes, and no one to revise it. A dispensatory is not easily made, particularly one which shall be at all equal to the one of the past. To bring the Dispensatory up to the present time it would require to be rewritten rather than revised. There is probably more than one-half of the book which might well be left out; for much of the information given in the Dispensatory can be found in botanical works or works on therapeutics. If you take out the therapeutical and botanical parts of the book, you will have left a dispensatory of not more than one-third the size of the present work. Such a contraction of the matter of the Dispensatory would bring it down to the scope of a pharmacopœia well adapted to the wants of this country; and one could thus be made which would stand alone—that is, need no commentary. But if the Pharmacopœia is to be kept a skeleton as it now is, it must have a commentary to render it of much service; and then the question of the future is how to get both Pharmacopœia and Dispensatory. Whether men could be found who would give the labor again, of producing a pharmacopœia even as good as the present one, without pay, is doubtful. And then

* See October number, p. 306, and July number, p. 217, sqq.

how shall a proper dispensatory be secured? In the past it seems pretty certain that had there been no pharmacopœia there could have been no dispensatory, and had there been no dispensatory, a pharmacopœia upon the present plan would have been a failure; and again, that the income from the Dispensatory has been the real foundation of the success of both Pharmacopœia and Dispensatory, and that without such a foundation of skilful labor well paid for, the success of a pharmacopœia of the future is, to say the least, very uncertain, and the attempt to get one very hazardous.

These are some of the thoughts I wish to throw out at the commencement of the discussion.

I will now allude to my own design or plan for a new Pharmacopœia. I believe the time has come to depart from the old classic ideal of a pharmacopœia whereby it is mainly a catalogue and dictionary of the materia medica. We need something more. An illustration, perhaps, will convey my meaning. Take, for example, the article Rheum; the definition now given is that it is the root of Rheum palmatum *and other species of rheum.* What kind of a definition is that? If needed by the botanist, it gives no information of value, because it speaks indefinitely of other species than the Rheum palmatum. If intended for the druggist it does not give any satisfactory knowledge, and if intended for the physician it is of no avail.

The physician and pharmacist wish for something to tell them how to select good rhubarb, and care less for the botanical species than for sensible properties and tests. Now, to add to the botanical species, something which is even more useful—something whereby the pharmacist may judge of the root as he finds it in the market, and the physician may judge when he handles and uses it—something which will comport more with the usages of the day than a mere botanical definition. I would propose to make a pharmacopœia which should need no dispensatory, one which, for the scientific information required, would refer to the proper works where it may be found, whether it be the botanical description or the therapeutical uses,—and there is no lack of books on either subject. Now let us refer to this use of the Pharmacopœia, not simply as a dictionary, but as a book which shall describe familiar drugs, or a drug as it is met with in the market, with the processes necessary for its preparations; not written in quite so dignified a style, but in such concise detail that the pharmacist may take the description of a process and use it line after line in the preparation of the article which is being described. You may say that it would make much too large a book. I doubt it. In the first place, I would not have the book printed in so large a type as it is now. I would not aim to make it a mere outline, nor so prolix as to be cumbrous, but rather at the line of utility.

The same reasons which were urged for changing the language of the Pharmacopœia from Latin to English may be made applicable here—not only in the language, but in the detailed description of the processes employed, because the description as well as the language should be as plain as possible and as full. Let us have a standard for the working processes as well as for the ingredients and quantities of all the established preparations. Then, having that, and making a revision perhaps every five instead of ten years (subsequently perhaps even oftener than that), we should be able to keep within the covers of the Pharmacopœia nothing but what has been fully tried, fully known, and fully described in detail.

Such a revision would decimate the present lists, for there are many articles here which might be dropped. Not that they are entirely useless, but that they are not appropriate articles to be retained in a pharmacopœia when they take up room which might be given with greater advantage to the details of primary articles. If the Pharmacopœia be so restricted, we should need something more; and my design embraces the idea that the authorities of the Pharmacopœia, whoever they may be, should issue an annual fasciculus, which should never be dignified with the standard force and authority given to the established Pharmacopœia, but be more ephemeral. A thing which would expire at the end of each year, and contain the current information of the previous year. I would have this annual, however, published by the same authority which publishes the Pharmacopœia. Now, that annual might contain a great deal which would not be looked upon as suitable to be retained or admitted in the Pharmacopœia proper. It might contain a description of all the novelties which come along—for instance, such an article as jaborandi, of which there was little or nothing known when it came into use—and it would have competent authority, as soon as anything of that kind was published, to send for the article, to put it upon trial, place it in the hands of proper men after it has been properly prepared, put it in the way of being used in hospitals, and so get all the information possible and publish the results of the observations in the next succeeding year. This book would never exceed the Pharmacopœia in size, and it might be a mere fasciculus for the first year or two. My impression is that such a book as that would be really more useful, both to medicine and pharmacy, than the Pharmacopœia as it is. The Pharmacopœia would still be essential and indispensable, because it is the standard; but for obtaining current information, a work, such as the book I have described, would be more useful to physicians and to the pharmacists than the Pharmacopœia itself. From it could be obtained information quite inappropriate to a standard pharmacopœia. Within two years the necessary information could be obtained regarding any article that might be proposed as a therapeutical agent, which would either discard it entirely, or place it upon further trial, or introduce it into the Pharmacopœia. At present all the novelties are in risk of being lost, or so perverted and extolled that they are dropped, or get into commercial hands and become used as proprietary medicines in one way or another.

Such a book as I have described should be issued in a cheap form, and the copyright should pay for the labor expended upon it. At first, there would probably be an expense to be met, perhaps some thousand dollars or so, to be obtained from some source for the purposes of its support; but the moment it is placed upon a reliable basis, such as will enable it to communicate valuable information to the physician and pharmacist, it would sell so as to abundantly pay everybody connected with it. The copyright of the Pharmacopœia, and the book proposed, would be very valuable if the work was properly done, and would amply reward the labor which might be given.

Now, how is the work to be done, and by what authority? Our friend, the President, has just said that the pharmacists and physicians should unite in the making of the Pharmacopœia. Upon that point I agree with him entirely. But he says they should unite in equal proportion. That brings up a point which to my mind is important, and which I wish to strenuously insist upon.

Pharmacy is but a specialty of medicine, and should any one attempt to sever it from medicine, it would be like attempting to sever surgery from medicine. Medicine was once a single concrete art. The same man who attempted to heal the sick prepared all his remedies, performed surgical operations, did teeth-drawing and leeching, and everything else connected with the cure of disease. As the art grew, its scope became too great for any single man, and surgery was probably the first offshoot from the general art of medicine as a specialty. The performance of surgical operations was mechanical entirely, but surgery requires some knowledge of all the branches of medicine. Pharmacy was probably the second offshoot, and the very word *drug* carries us back to the time when it was regarded as necessary to *dry* the medicine for use all the year round instead of giving it prepared in the green state. When medicines were used in the fresh state, and were collected by the physician as used, there was no pharmacy; but when collected, dried, and stored for uninterrupted use, then it was that pharmacy commenced, when the physician could no longer afford the time necessary to attend to both branches of his business. Thus it is that pharmacy is as much a part of medicine as surgery, or ophthalmology, or gynæcology, or as any of the specialties in medicine, and it is only a part.

Now, if pharmacy claims that it should revise and control the Pharmacopœia, and should invite medicine to join, it

would be an example of a stream rising higher than its head. What is pharmacy without medicine? Where is the origin of pharmacy? It is in medicine. It is but a subordinate part of the medical art.

Now, *if* it be, and I *must* assume that it *is*, simply a specialty of medicine, then medicine has a controlling interest in it. The Pharmacopœia then, is a general interest of medicine. It is not a general interest of pharmacy alone, but it is one of the general interests of medicine. Now, if one of the general interests of medicine, who has a right to its control? The united interests of medicine, and not the interests of any separate part; and the united interests of the united parts is found, in this country, in the American Medical Association, and nowhere else. By right every pharmacist should be a member of the medical profession by education, and should then be a member of the American Medical Association, for there is where he belongs, to practice one of its specialties. Now, if this be so—if pharmacy is but a general interest of medicine, then wherever the organization is found which embraces the general interests of medicine, it is there that the Pharmacopœia should go, for it is there that it belongs.

If the American Medical Association is the custodian of the general interests of medicine, and is therefore entitled to the control of the Pharmacopœia, then no other association is entitled to it.

The National Convention which has heretofore met for the revision of the Pharmacopœia, has been a delegated body, and the delegates have come from the same sources as those of the American Medical Association and the American Pharmaceutical Association. For many years this convention was composed of medical men alone, and the pharmacists came in as soon as needed and when desired. In Great Britain, the body which controls the Pharmacopœia consists of medical men only. In Germany, this matter is under the direct control of the government. But we can have no such pharmacopœia in this country as in Germany, for we have here a free country, and the people have a right, with regard to certain matters, to do and think as they please. Every man has a right to have his disease treated as he pleases, and as long as the will of the subject is the law of the land, that will must be recognized, and it is the basis of all the laws we have. There are many laws upon the statute books which aim at something else besides freedom of the subject in such matters, the law in regard to the sale of poisons, for example; but they are not enforced, or, if enforced, it is either through malevolence or some personal consideration. Hence we cannot hope to have a governmental pharmacopœia in any true sense of the term. This National Convention which has met from time to time in the city of Washington has had no relations whatever with the government, or been guided by any authority except that which it maintained by its own deserving labor and results as a self-constituted body, and depends for its own continuation upon a presidential call for the Convention every ten years. This organization is, as far as its numbers go, a duplicate to the American Medical Association and the American Pharmaceutical Association, because its delegates are found in these bodies, the same men serving as delegates; hence, the Convention is nothing more than a delegated body from the same sources as the American Medical and American Pharmaceutical Associations.

Now, my plan for the Pharmacopœia of the future, under the circumstances above alluded to, involves a radical change. Whether it will be desirable to make this or any change depends upon the discussions and interchange of thought during the next one or two years.

Let us concede for a moment that the Pharmacopœia is a general interest of the medical profession, and that the American Medical Association is the only organization truly representing that profession in this country, and that it assumes the Pharmacopœia as among its general interests. If it does that, it has to do something whereby the present officers of the National Convention may be relieved from calling a convention in 1880. That can be easily done, for the American Medical Association can say, next year if it chooses, to those bodies which are at present represented in the Association, and were represented in the last decennial convention, that the Association has decided to take possession of the Pharmacopœia, and ask such bodies, if it be in their judgment a proper move to make, to send delegates with authority to transfer allegiance from the National Convention to that Association. Then, if complied with, the matter is plain, for the American Medical Association can pass a resolution asking that the President of the National Convention shall not call the convention in 1880, and that resolution being supported by the action of the bodies represented in the National Convention, will probably be regarded as sufficient to relieve the President of the Convention from the duty of issuing the call in 1880, and if no call be issued there will be no Convention. The American Medical Association will then own the U. S. Pharmacopœia, and that with a proper regard for the duties and responsibilities of the officers of the National Convention.

Now the American Medical Association, as a large, unwieldly, migratory body, must manage such an interest as this by some fixed and permanent body organized for the purpose, within the Association—some committee, board, section, or council—and for this purpose must endeavor to combine all the specialties which make up the general art of medicine, but more particularly aim at two of these specialties. First, Therapeutics, to select and apply remedies, and by their effects to judge of their place and their utility to medicine, and to determine the quantities and proportions in combining them. Therapeutics must first need a remedy, and know how to study it and apply it to the need, before the sources of supply can be developed. Second, the specialty of Materia Medica, Chemistry, and Pharmacy. Materia Medica is inseparable from Therapeutics on the one hand and Pharmacy on the other, and is the connecting link between them, but the line of separation is far more difficult to draw here than between most other specialties. Therapeutics, in the general practice of medicine, selects remedies through Physiology and by experimental research, from the domain of Natural History and of Chemistry; Materia Medica sets these apart, studies them in their special adaptation to medicine, and defines and describes them; Chemistry is next needed by Materia Medica to study the composition and constitution of remedies, and separate or combine their different elements by the laws of their physiological and therapeutic action first, and next by the laws of Chemistry. Finally Pharmacy is needed to prepare, to store, to compound and to dispense the Materia Medica for use, in its ever-varying quantities and combinations.

Hence, while Therapeutics, as the foundation and the cause, must embrace Materia Medica and Chemistry, it now equally needs Pharmacy to complete it as a specialty of medicine. And Pharmacy as a profession and as a specialty of medicine embraces Materia Medica and Chemistry, and adds to them the mechanics of a special art; just as Surgery studies Anatomy, Physiology and Pathology, and adds to *them* the mechanics of a special art, to form the specialty of Surgery. From these considerations it must be admitted that the American Medical Association needs for this work very carefully-selected men, some of whom can be best found in the ranks of Pharmacy. But pharmacists, unlike surgeons and other specialists, have separated themselves from the general organization of medicine, and have formed a profession and organizations of their own, and have a National Organization to which delegates are sent up just as in the case of the American Medical Association.

Now in this management of the Pharmacopœia the American Medical Association has the choice of doing without Pharmacy, except what it can find within its own organization, or of inviting the co-operation of Pharmacy through its separate organization. This latter seems the only wise course, whether it be adopted or not, and upon such a course I propose to base my plan. The American Pharmaceutical Association, at its last meeting, signified by resolution its readiness to co-operate with the American Medical Association in this work, but upon what terms was not decided; and if it should take the matter up at its next meeting on the terms advocated by some members, of

taking the Pharmacopœia into its own keeping, and then inviting the co-operation of The American Medical Association, then, of course, my plan will entirely fail.

This plan, which is to be submitted to the American Medical Association at its meeting in June next, is that it shall organize a Pharmacopœial Council, to be incorporated if necessary, consisting of five members, which Council shall be charged with the entire management of the Pharmacopœia and all that pertains to it, and be responsible only to the American Medical Association. This Council I would propose to form as follows: the nominating committee of the Association to nominate, and the Association to elect the president of the Council; then the Association to invite the Surgeon-Generals of the Army and Navy each to appoint one member, and invite the American Pharmaceutical Association to appoint two members. This number is chosen rather than a larger one, because it is generally conceded that small bodies work better than large ones, with less friction and more harmony of action, and that the smaller the body the closer the responsibility and the better the results. With due care in the selection and appointment, such a Council would fairly represent the general interests of medicine throughout the nation, the general government of the nation, and the pharmaceutical interests of the nation, and would thus be about as general and as national in its construction as the circumstances will admit, and would be so balanced as to prevent bias in the direction of any special or peculiar interests, while its elements should bring to it men of such education and attainments as to qualify them for learning pretty rapidly the duties which would devolve upon them. This Council should have an actuary to serve as secretary and editor, who should be permanently employed in the work, under the immediate supervision and direction of the president. This officer should be selected by the Council with great care, and as an expert chemist and pharmacologist would be needed, such would be difficult to find, and many changes would be necessary before the right officer could be had. This office should be as liberally paid as the income would allow. With the president and this actuary for continuous work, the Council would need to meet, during the general revisions, say once in three months, and at other times twice or three times a year, each member bringing to the meetings such work as may have been allotted to him. Each member should be paid, from the first, his actual expenses of attending such meetings, and as the income should increase be paid for his services over and above his expenses, at, say, so much for each meeting attended. The income from the work of such a council would in two or three years adjust itself. The work must be done before it could be copyrighted and offered to the publishers, and then would bring just what it might appear to be worth to publishers—and this might be little at first—for with a council new to their work they might not make very valuable books at first. But ultimately the value of the work to the Council, in paying for the labor upon it, would be exactly in proportion to the true merits of the work and its utility to the professions, so that the better the quality of the labor, and the more of this labor bestowed upon the work, the better would the Council be paid, and the better the expert labor they could afford to employ upon it. From these considerations it would be very important to this Council to have all its members workers, and it should have a means provided for getting rid of members who cannot or will not do their full share of work.

Such is a brief outline of the plan which it is now our purpose to discuss. Points omitted, or not made clear, will be brought out in the discussion, and the faults, which are doubtless numerous, will, I hope, be found out. In a matter of so much importance I try to hold my own judgment open, for, of course, I cannot be sure that I am right in this movement. And I feel a grave responsibility in disturbing an established result which has been, in the main, so good. Hence it is that I need all the criticism and all the discussion I can get for the subject and the plan.

DR. F. HOFFMANN:—I regard it as important to decide whether the Pharmacopœia should be made a book which should give precise and definite description of drugs and chemicals in order to insure their identification and quality, or whether it should be a book which might be turned to for the settlement of legal questions. I am of the opinion that it should be made a book of authority for assistance in rendering legal decisions. The chemists and pharmacists, and botanists, when they wished for information, did not go to the Pharmacopœia, but to standard works upon chemistry, pharmacy, and botany.

THE PRESIDENT:—I would say that I am entirely in favor of an independent book, which does not lean upon the Dispensatory as it has done in former times; one which is in accord with the most advanced state of the entire profession. I would have a book containing definite and concise descriptions of the qualities of the drugs and chemicals, tests for their purity, etc., with only such details in description as are necessary for the daily use of the physician and pharmacist. I stand by the programme drafted by the Committee on the Pharmacopœia appointed by the American Pharmaceutical Association. One of the amendments to the present Pharmacopœia advocated by that programme is, that the book should give a description of the appearance and qualities of the crude drug, its chemical properties, etc., and all that pertains to it which is of value to the physician and pharmacist.

The practical effect in carrying out that plan would be to throw out the secondary list of articles altogether. I would also advocate that measures should be abolished, and weights adopted, and if possible that the metric system should be introduced. Besides, to complete the book, a larger number of tables should be appended, containing, for instance, maximum doses, the comparative value of troy and metric weights, etc., etc. A book of that kind would be, in my opinion, in harmony with the modern use of Pharmacopœias. Of course we have to provide the means of getting a book of this kind, but if the plan suggested by Dr. Squibb be carried into effect, the Pharmacopœia would also pay for the labor expended upon it, after a short time at least.

DR. H. J. MENNINGER:—The first question to be decided is, what incorporated body should produce the book; whether it should be done by the pharmacists alone, or by a combination of pharmacists and physicians? Would the pharmacists be strong enough to control the publication of the Pharmacopœia? Some seem to think that they are able to do it, but I question very much whether they would be able to do it without the co-operation of the medical profession.

THE PRESIDENT:—For my own part, I do not believe it, nor do I think they would wish to.

DR. MENNINGER:—The American Pharmaceutical Association seems to think that the pharmacists do not have sufficient to say in the matter, and that it is left altogether too much to the medical profession. This is a very important question and should be decided first; and it is also difficult how to decide it. I am strongly in favor of Dr. Squibb's plan for a new departure.

DR. SQUIBB:—There is one danger before us in this matter, and that is, there is no law in this country to control and support a pharmacopœia, and therefore it can have no legal status. Dr. Hoffmann looks to a pharmacopœia such as those of Europe where they are made by law, and have the force of law. But such we cannot have. The Pharmacopœia may be recognized as scientific authority, but has no legal status, and is not recognized in law in this country. Upon this hangs another danger, and that is, that unless medicine and pharmacy harmonize, or if they clash, there is danger that we may have two or more pharmacopœias. Any man or set of men has a right to publish a pharmacopœia. It is true, they would not have the right to call it the U. S. Pharmacopœia, for in name as in text the copyright protects it. If the American Medical Association took the title from the Convention and produced its book first, then the pharmacists would be obliged to call their book by some other name. It would be well, if possible, to prevent such confusion and clashing, by securing harmonious action beforehand.

THE PRESIDENT:—I do not think that there would be any difficulty in meeting that question. Justice requires that both professions should be equally represented. In no case should pharmacy alone have control of the Pharmacopœia; no more should medicine, but they should go together. But I say that the principal part of the book is the pharmaceutical portion. After physicians have decided what preparations should be made officinal, then the pharmacists will have to select the drugs, select the chemicals, devise modes of preparation, state the appropriate tests, and so on; and all of this makes it the most important part of the work. Therefore, I say, that both professions should be equally represented. If the medical profession have the advantage over us, we should let them make the initial move, and then follow. The question as to whether this profession or the other shall have control of the Pharmacopœia, I think is settled.

MR. SCOFIELD:—In view of the fact, that the great medical family was broken up into specialties, and that the medical practitioner who was most noted and best educated could get out the best work upon the practice of medicine, and the most eminent surgeon could get out the best surgical work, why should it not be the case that the learned pharmacists should get out the best Pharmacopœia for the profession? Besides, I am in favor of accompanying the work of the Pharmacopœia with the Dispensatory, but I cannot understand how it is that the medical profession should ask the privilege of getting out a pharmaceutical work. It seems to me that the pharmacists could get out a far more valuable book than any part of the medical profession can get out for us.

DR. SQUIBB:—The answer to Mr. Scofield's query is not difficult. The Pharmacopœia is not a work upon pharmacy. To regard it as such is a mistake which the construction of the word pharmacopœia suggests. The Pharmacopœia is a work upon the Materia Medica and is the source of, or gives origin to pharmacy. There could be no pharmacy without a Pharmacopœia, no more than there could be a practice of law without statutes or enactments. The pharmacy must be based upon something, and its precept is the Pharmacopœia. The pharmacist has the Pharmacopœia as his guide upon which pharmacy is practised. Pharmacy does not select the substances for a Pharmacopœia, nor decide upon their combinations or proportions, but simply prepares them by expert skill for use in the best way, by rules laid down for it in the Pharmacopœia as a standard or law of the Materia Medica. After the physician gives the combination to be made, then the pharmacist makes it with knowledge and skill. That is his part of the art. Pharmacy presupposes a Pharmacopœia; but it does not make it.

DR. MENNINGER:—Pharmacy, after all, is but one of the minor branches of medicine. The Pharmacopœia should be regarded as the standard for that which may be required by the physician and be furnished by the pharmacist. I do not wish to undervalue, by any means, the labors to be performed by the pharmacist, but I think the relative strength is a matter of minor importance, and one over which there is not likely to be any quarrel, if the men selected by their appointing bodies are competent. For, if they are competent, it would be ludicrous to quarrel with regard to numerical strength. But suppose there is a conflict between the two professions and each gets out a Pharmacopœia; to what would it lead? The physician certainly would have the power to indicate which formula he wished his medicines combined after, and we must remember that we are the merchants who supply the orders written by the physicians. The pharmacist may establish a standard, but who will call for it? The demand is created by the physician.

I am in hearty keeping with the plan of the President, that the physician and pharmacist should be equally represented; that neither should assume to be dictatorial in this matter, but, on the other hand, as conciliatory as possible, and the pharmacists will lose nothing of dignity by allowing that we are only a branch of medicine.

MR. RAMSPERGER:—I do not believe that any sensible pharmacist will take away from the physician the right of saying what his prescription shall be composed of, or how large his doses shall be. The pharmacist simply should want the right to say how it shall be prepared, after the physician has said what articles shall enter into the combination and has given the doses. A union of the two professions in this work will bring out a Pharmacopœia which will be for the best interests of both.

DR. MENNINGER:—Inasmuch as our Pharmacopœia has no equal authority, I should incline to think that it would be better that it should be a little more voluminous than the last edition. There are many things which might with propriety be added, and still not make it an exhaustive treatise. The present edition is in many respects very brief. We have in only a few instances a supply of tests and reagents given. In some instances the origin of supply could be with great propriety mentioned. I think we should not go over to the metric system in the revision. I prefer the system adopted in the new German Pharmacopœia, where the quantity is designated by parts. I think that is specially desirable, as sooner or later we shall have to go to the use of the metric system at our prescription counters. Accustoming the apothecary to the use of parts instead of ounces, drachms, and grains, would lead him to form estimates with regard to quantities, irrespective of names, and would be a favorable aid in the adoption, finally, of the new system altogether. I think that the present Pharmacopœia, in the retention of weights, has committed a grave error.

DR. HOFFMANN regarded the competency of the men who do the work as the question of most importance. With regard to how the work shall be done by the Council, it should be divided into three parts. There should be chemists to do a certain part; botanists; and third, the pharmacists proper. The entire work should be under the direction of the medical men. All the other Pharmacopœias have been published under the leadership of medical men. It is far more important that the work shall rest upon men thoroughly adapted to its performance, rather than any special number, or certain numbers from each profession.

DR. SQUIBB remarked that the council which had been suggested was not a council to do all the work, but to employ experts. No council of five men could embrace all the knowledge necessary to the formation of the Pharmacopœia, but it might embrace all the knowledge necessary to obtain the services of men who could do the work, and to direct, check, and guard the results.

MR. RICE:—There can be no doubt that when it comes to the real work of making and constructing the Pharmacopœia, the pharmacists will have by far the greatest share of the labor; and while it is perfectly just to leave the leadership and general direction of the work to the medical profession, the pharmacist will in the end not fail to receive the credit for a proper performance of his part of the work.

DR. SQUIBB:—I wish to draw attention to another point, which must not be lost sight of. More than one-half of the pharmacists are merchants only, and there is always danger when mercantile interests control the Materia Medica. Special education and knowledge, such as is naturally opposed to mercantile interest in large profits, should guard all such work, and upon such careful guarding much of the true merit of the work as a standard would depend. Then its true merit and utility would be the measure of its success, no matter whether the Council making it should consist of three pharmacists and two physicians, or three physicians and two pharmacists. With my present views of the relations of pharmacy to medicine, as I have just tried to express them, I could under no circumstances go before the American Medical Association with any such proposition as to construct a council of two medical men and three pharmacists, nor with a council of three of each, because I do not regard the interest as being different, but equal. But I regard the interests as a single indivisible interest of medicine which can be managed without the pharmacist, but can be much better managed with his expert knowledge and skill in the details which belong to his specialty as a medical chemist, and not at all to his specialty as a merchant. It is hard to conceive

how there could be much clashing in a small council acting upon a single indivisible interest. The influences of trade and of profits are the only ones tobe feared, and as these would be alwayson the side of the pharmacists, they should be in the minority, for safety to the Council and its work. The danger that each member of such a Council might not get public credit for the work he really did, is incident to all such bodies, and cannot be avoided in joint work; but that this should cause serious professional jealously among men fit to be entrusted with such work I can hardly believe. That the two National Associations should be jealous of the share of credit, justly due to each, is still more difficult to understand, and such jealousy can only be based on the idea of two separate and, to a certain extent, antagonistic interests at work on the same subject, and if this be the true idea, then pharmacy should be left out altogether. I do not believe it is the true idea, do not believe in any antagonism, if the proper men be selected, and therefore fear no such difficulty.

At the close of the discussion, a vote of thanks was passed to Dr. Squibb for his able, frank, and lucid statement of the questions involved; and the suggestion was thrown out to call another meeting of the College for the purpose of exchanging views thereon, at some future time.

The meeting then adjourned.

NEW PATENTS AND LAWS.

[*We will furnish gratis, to subscribers, any information relating to new patents which can be obtained from the Official Gazette of the Patent Office; and for 50c. will give copies of the drawings of such as are illustrated.*]

LABELS REGISTERED IN THE U. S. PATENT OFFICE.

Certificate dated Aug. 22, 1876.

819. "'That' Pile Cure."—Garden & Minor, Belmont, Wis.

Certificates dated Sept. 12, 1876.

825. "Miller's Pain Curer."—George Y. Miller, Luzerne, N. Y.

826. "Cod-Liver Cream."—D. A. Shermer, Baltimore, Md.

Certificates dated Sept. 19, 1876.

828. Acheson's Hair Generator."—P. Tenney, Gates, New York, N. Y.

Certificates dated Sept. 26, 1876.

830. "We Solicit one Trial of Jettine."—Orvel Holden & Co., Chicago, Ill.

831. "Dr. F. P. Metz's German Remedy for Leucorrhœa."—Frank P. Metz, Keokuk, Iowa.

Certificates dated Oct. 3, 1876.

832. "Tonic Bitters."—James M. Branson, Mount Vernon, Ill.

834. "Leland's Magic Curer."—Anna Newell, New York; N. Y.

TRADE-MARKS REGISTERED IN U. S. PATENT OFFICE.

Certificates dated Aug. 22, 1876.

3,946. **Cosmetics.** Louise Potter, New York, N. Y., word "HYPATIA."

Certificate dated Aug. 29, 1876.

3,959. **Bitters.**—Henry H. Raphall, New York, N. Y., "the letters and number 'A. R. 100,' together with a word in Hebrew characters below the name, signifying 'Perfect Cure' (Rafuoh Shalamoh)."

Certificate dated Sept. 12, 1876.

3,975. **Medicines.**—Alexian Brothers, St. Louis, Mo., "a picture of the institution of the Alexian Brothers in St. Louis, Missouri, known as the 'Alexian Brothers' Hospital.' Above the picture are inscribed the words 'Trade-Mark.'"

Certificate dated Sept. 19, 1876.

4,002. **Bitters and other Medical Preparations.**—Dwight G. Stoughton, Hartford Conn., "a picture of the Sphinx."

Certificate dated Sept. 26, 1876.

4,008. **Electro-Voltaic and Magnetic Appliances.**—James Bryan, New York, N. Y., "the representation of a lion in the act of grasping or seizing streaks of lightning."

Certificates dated Oct. 3, 1876.

4,028. **Vegetable Tonic.**—Lydia C. Howes, South Yarmouth, Mass., "the word-symbol 'PAWKUNNAWKUT.'"

4,034. **Medical Compound.**—Anna Newell, New York, N. Y., "the words 'LELAND'S MAGIC CURER' in connection with the fac-simile of the signature of Daniel Leland.'"

4,037. **Medical Compound.**—Joseph Steer, New York, N. Y., "the word-symbol 'ANTIMALARIUM' when used in conjunction with the representation or figure of a bottle labeled with a miniature of my trade-mark."

NEW PATENTS.

Patents granted Aug. 22, 1876.

181,249. **Boiling Apparatus.**—James H. Corey, New York, N. Y.

181,261. **Ladies' Chest Protectors.**—H. Hayward, New York, N. Y.

181,262. **Metallic Sieves.**—Granville Herring, Chicago, Ill.

181,268. **Apparatus for Generating Carbonic-Acid Gas.**—Adolph Kayser, Buffalo, N. Y., assignor to Pascal P. Pratt, same place.

181,273. **Ice-Crushing Machines.**—David W. Low, Gloucester, Mass.

181,304. **Furnaces for Assaying.**—T. M. Berge, New York, N. Y.

181,333. **Retorts for Distilling Mercury Ores.**—Frederick Gutzkow, San Francisco, Cal.

181,342. **Magneto Electric Machines.**—William Hochhausen, New York, N. Y.

181,468. **Water-Purifying Apparatus.**—Melchoir Nolden, Frankfort-on-the-Main, Germany.

181,476. **Composition Paste for Fly-Paper.**—J. Ralston, Greenville, Pa.

181,510. **Liquid-Measuring Tanks.**—Blasius Williams, Marshal, Texas.

Patents granted Aug. 29, 1876.

181,553. **Generating Electric Currents.**—Alexander G. Bell, Boston, Mass.

181,584. **Cocks and Faucets.**—A. Luhrs, New York, N. Y.

181,615. **Bottle-Stoppers.**—A. Albertson, Jersey City, N. J.

181,617. **Bromine Stills.**—F. W. Arvine, Hartford City, assignor to H. Lerner, Mason City, W. Va.

181,680. **Oil-Cans.**—Alonzo D. House, Ulster, Pa.

181,724. **Vent-Faucets.**—Alex. B. Roney, Pittsburg, Pa.

Re-issued.

7,284. **Tumbler-Washers.**—M. Scrannage, Boston, Mass. Patent No. 82,997, dated Oct. 13, 1868.

Patents granted Sept. 5, 1876.

181,814. **Apparatus for Purifying Paraffin.**—Frank G. Barstow, Cleaveland, Ohio.

181,856. **Processes for the Defecation of Saccharine Solutions.**—H. Leplay, Paris, France.
181,908. **Spectacles.**—Samuel F. Chandler, Springfield, Mass., assignor to himself and Henry F. Chandler.
181,943. **Liquid Measures.**—William K. Johnston, Cordova, Ill., assignor of one-half his right to C. L. Maxwell, Princeton, Iowa.
181,999. **Manufacture of Vinegar.**—A. H. Tait, Jersey City, N. J., and C. A. Ford, Brooklyn, N. Y.

Re-issued.

7,295. **Paper Boxes.**—David K. Osbourn, Baltimore, Md. Patent 170,639, dated Nov. 30, 1875.

Patents granted Sept. 12, 1876.

182,013. **Spectacles.** — George Andross, Hartford, Conn.
182,024. **Catamenial Sacks.**—G. E. Johnston, Chicago, Ill.
182,064. **Corks.**—Patrick Gibbons, Keokuk, Iowa.
182,067. **Invalid Attachments for Beds.**—Edwin W. Grafton, Chicago, Ill.
182,082. **Valved Nozzles for Bottle-Stoppers.**—Elias B. Requa, Jersey City Heights, N. J.
182,083. **Water Coolers and Purifiers.**—John D. Seymour, St. Louis, Mo.
182,097. **Funnels.**—John O. Barton, Chicago, Ill.
182,101. **Negative Plates for Galvanic Batteries.**—John Byrne, Brooklyn, N. Y.
182,160. **Apparatus for the Manufacturing of White Lead.**—Ludwid Brumlen, London, England.
182,169.—**Apparatus for the Separation of Petroleum Products.**—Jas. Cole, Jr., Cleveland, Ohio.
182,191. **Nozzles and Vents for Liquid Vessels.**—David C. Herbert, Pittsburg, Pa.
182,203. **Electrical Apparatus.**—Jerome Kidder, New York, N. Y.
182,234. **Preparation of Alizarine, etc., made from Anthracene.**—Richard Simpson, Arthur Brooke, and Thomas Royle, Harrow, England.
182,247. **Soaps.**—Marshall Turley and John Fleming, Council Bluffs, Iowa.
182,261. **Soap Compositions.**—Charles D. Wooley, Walden, N. Y.

Patents granted Sept. 19, 1876.

182,273. **Magneto-Electric Machines.**—Joseph Gray, Sheffield, England.
182,294. **Tonic Preparation.**—W. Turner, Mount Carmel, Ill.
182,357. **Bottle-Stoppers.**—Jason Clark, Alleghany, Pa., assignor to Angelina K. Clark.
182,362. **Processes and Apparatus for Refining and Packing Sulphur.**—Edwin J. Frazer, San Francisco, Cal.
182,371. **Processes of Eliminating Phosphorus from Iron.**—J. B. Kunkel, Catoctin Furnaces, Md.
182,389. **Atomizers.**—Frank E. Stanley, Auburn, Me.
182,404. **Shipping-Cans.**—Lewis F. Betts, Chicago, Ill.
182,421. **Explosive Compositions.**—Louis de Soulages, and Raymond Cahuc, Toulouse, France.
182,431. **Composition and Processes for Making Artificial Coral, Ivory, etc.**—Julius Frauenberger, New York, N. Y., assignor to C. L. Joslin, W. L. Palmer, and A. W. Williams, composing the firm of Joslin, Palmer & Williams.
182,437. **Pessaries.**—Evans B. Harding, Northampton, Mass., assignor to M. L. Harding, same place.

Patents granted Sept. 26, 1876.

182,542. **Remedy for Hog-Cholera.**—M. R. Yewell, Bardstown, Ky.
182,549. **Evaporating Pans.**—John S. Blymyer, Cincinnati, Ohio.
182,612. **Siphon-Heads for Mineral-Water Bottles.**—Joseph W. Stillwell, Peekskill, N. Y.
182,638. **Water-Filters.**—Isidor Brach, Philadelphia, Pa.
182,657. **Apparatus for Drawing Effervescent Liquids.**—Charles Greiner, New York, N. Y.
182,658. **Soda-Water Fountains.**—Chas. Greiner, New York, N. Y.
182,674. **Sheet-Metal Cans.**—Tryon J. M. Jewell, New York, N Y., assignor of one-half his right to Nathan Seeley and Geo. I. Stevens, same place.
182,701. **Trusses.**—William L. L. Pierce, San Francisco, Cal.

Re-issue.

7,324. **Metallic Cans.**—George W. Bell, Brooklyn, N. Y. Patent No. 167,870, dated Sept. 21, 1875.

Patents granted Oct. 3, 1876.

182,760. **Sealing Bottles, Jars, etc.**—C. M. Jacob, Paris, France.
182,775. **Apparatus for Distilling Oil.** — Henry C. Rose, Cleveland, Ohio.
182,780. **Apparatus for Evaporating Liquids.**—Jas. E. Weaver, Pittsburg, Pa.
182,784. **Cases for Transporting Bottles and Bottled Liquids.**—George Wilson, Toledo, Ohio.
182,802. **Electrical Piles.**—Jules Cerpaux, St. Jossetin Noode, Belgium.
182,852. **Scale-Beams.**—Edward A. Rock, Ludlow, Vt.
182,905. **Metallic Cans.**—J. F. Drummond, New York, N. Y.
182,919. **Microscopes.**—Ernest Gundlach, Rochester, N. Y.
182,934. **Self-Opening Cans.**—Tryon J. M. Jewell, New York, N. Y., assignor of one-half his right to N. Seeley and George I. Stevens, same place.
182,972. **Trusses.**—Winfield A. Turner, Hiawatha, Kan., assignor to himself and J. F. Roehen, same place.

Re-issues.

7,335. **Bottle-Stoppers.**—Theo. A. Weber. New York, N. Y. assignor to Joseph H. Woodman. Patent No. 66,270, dated July 2, 1867.
7,337 **Eye-Glasses.**—Isaac Alexander, Washington, D. C. Patent No. 174,753, dated March 14, 1876.

PHARMACEUTICAL SUNDRIES AND NEW INSTRUMENTS.

Microscopes for Pharmacists.—It affords us great pleasure to bring to the notice of the profession, that Dr. Frederick Hoffmann, of 797 Sixth av., N. Y., has received an invoice of the well-known

HAGER-MESSTER'S MICROSCOPES,

which are particularly adapted for the use of pharmacists and chemists, in the microscopical examination of crude drugs and other articles of commerce. They are constructed in a very neat and solid manner, with screw adjustment, micrometer screw, three objectives magnifying from 50 to 300 diameters, 1 eye-piece, pincers, slide and cover, all contained in a mahogany box. The prices in currency are as follows:

Pharmaceutical microscope..... $20 00
Same, with more finished stand.... 22 00
Same, still more complete..... 26 00

In addition to these, the invoice contains a few *microscopes of the highest powers and complete adjustment*, price $32 and $40. And, finally, the *bijou* of the invoice, *microscopes with* 3 *systems*, 3 *eye-pieces, and immersion lenses*, complete and highly finished, price $85. Each of these instruments would cost in the New York market at least double the above amount. There being only a very limited number of the invoice unbespoken, intending purchasers should apply to Dr. Hoffmann at once.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, providing they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

Pyroligneous Acid. (A. B. and J. H. F.).—Commercial pyroligneous acid varies considerably in its composition, according to the kind of wood from which it is prepared. Oak, birch, and beech yield the largest amount; pine and other resinous woods yield much less. Damp wood gives a large amount of very weak acid, dry wood a smaller quantity of strong acid. The following table shows the average percentage yield of different woods:

	Tar.	Pyrol. Acid.	Acetic Acid.	Charcoal.
Pine	9.4	40.6	2.8	28.3
Fir	10.1	44.9	2.7	28.0
Spruce	11.0	40.9	2.4	26.1
Beech	5.5	47.3	5.7	23.9
Oak	6.4	47.6	5.4	24.9
Birch	6.0	48.0	5.7	21.1
Alder	5.2	47.7	3.9	24.0

The crude acid has a specif. grav. of 1.015–1.030, and contains, besides 5–9 per cent. acetic acid and 6–10 per cent. wood naphtha or methylic alcohol, varying quantities of propionic, butyric, and oxyphenic acids, acetone, methyl acetate, phenol, hydrocærulignon, ammoniacal salts, and certain other pyrogenic bodies not yet determined.

Croupee-Oil (A. McI.).—This oil is the product of the seeds of Carapa Toulucuna, a tree belonging to the nat. fam. of Meliaceæ, native of the Gold Coast and Sierra Leone, but occurring also on the east coast of Africa, and in Southern Arabia, whence the market of Cape Town receives a large supply. The oil is collected in the same manner as palm-oil, by drying the seeds for some time, then boiling them, and dipping off the supernatant oil. In the village of Kent, in the west of Sierra Leone, the oil is called kundah-oil. It is used for burning, painting, soap-making, and other industrial purposes; besides, it is used internally against tape-worm, and externally in scabious skin-diseases with great success.

Metric Weights and Measures in Prescriptions (H. H. B.).—In several countries of Europe, where the metric system has already been legalized, the laws prescribe that all prescriptions to be prepared at public expense (in army, navy, hospitals, asylums, etc.), must have the quantities of the ingredients written out in *words*, instead of figures. Physicians are generally restricted, by law or by custom, to the use of the following units alone: kilogramme, gramme, decigramme, and centigramme; all multiples or parts thereof must be expressed in terms of these units. The Pharmacopœia of the Austrian army, however, permits the army physicians to also make use of the litre *as measure*, but only in the case of water, or other liquids having nearly the same specific gravity, and ordered in quantity.

Syrupus Amygdalæ (H. B.).—There is no absolute necessity of *blanching* the almonds previous to emulsionizing them. Indeed, it is preferable to pound them at once in a wedgewood mortar with about one-eighth of their weight of water, until they have been reduced to a fine pulp free from lumps. On pounding the seeds without the intervention of water, the finer oil-particles run together and collect at the surface of the emulsion. Unblanched almonds yield just as white an emulsion as blanched ones; besides, the treatment with boiling water is liable to coagulate a part of the albuminoid constituent (amygdalin) necessary to produce the emulsion. The sugar which is to be added to form the syrup must be—at least in part—added to the unstrained mass, in order to ensure a better extraction of the fatty constituents through the formation of a tougher emulsion. To this should be added gradually, under constant stirring, the necessary quantity of *cold water*, or another *cold* menstruum, after which the mixture is strained and the residue strongly expressed. The formula of the U. S. Pharmacopœia is unexceptionable, except as to "blanching."

Lapis Divinus (O. G.).—This is prepared by mixing 24 parts each of alum, copper sulphate, and potassium nitrate, in fine powder, heating them in a crucible until they fuse, adding to the mixture one part of camphor, and pouring the liquid mass upon an oiled slab. When cold, it is broken up, and preserved in bottles. It used to be in considerable demand, and is yet officinal in the French and several other Pharmacopœias. A solution of one part in 250 parts of water, filtered, is used as an astringent collyrium. Its common synonymes are: Lapis ophthalmicus, Cuprum aluminatum; Kupferalaun, Heiligenstein (Germ.); Pierre divine, etc. (Fr.).

Hippomanes (G. W. C., M.D.).—The original meaning of this word has been the subject of much discussion among authors and critics; among other meanings, it denotes a "small, black, fleshy substance on the forehead of a new-born foal," which was supposed to be usually eaten off by the dam; and if she was prevented, she would not let the foal suck. It was eagerly sought after for preparing philtres (magic love-drinks). As to the "use of Hippomanes," we would suggest to you to consult *Hering, Dr. Const, Amerikanische Arzneiprüfungen*, etc., or some other homœopathic work. The Pharmacopœia Homœopathica Polyglottica defines it as: "The normal white, but generally dark olive, horn-smelling, soft, viscid mucus which swims in the allantois-liquid of the mare, or which adheres to the allantois, particularly towards the last months of gestation. For the provings the mucus was taken from the tongue of a new-born foal, and dried." How it can possibly have a therapeutic action, particularly in homœopathic trituration, is beyond our powers of comprehension.

Oil of Water-Hemlock (F. R.).—The root as well as the seeds of the European water-hemlock or cow-bean (*Cicuta virosa L.*) yield an ethereal oil, on distillation with water. The oil from the root is yellow, boils at 166° C. (331°F.), has a spec. grav. of 0.87, and a disagreeable odor; it is not poisonous. It consists mainly of the hydrocarbon cicutene. The pale yellow oil of the seeds contains cuminic aldehyde.

Phenol and Ferric Chloride (G. B. and others).—The following prescription was placed into our hands a short time ago, with the request to examine the peculiar compound produced on mixing the ingredients:

℞ Tr. ferri chloridi	ʒ	iij.
Acid. carbol	ʒ	j.
Potass. chlorat	ʒ	iij.
Glycerinæ	ʒ	iij.
Aquæ, q. s. ad	ʒ	viij. M.

On mixing these substances a brownish-black coloration and precipitate is noticed, which we have partially examined with the following results: In the first place, it is readily ascertained that the potassium chlorate takes no share in the reaction; then, remembering the reactions which ferric salts give with phenol (see our last number), on adding to a watery solution of carbolic acid a solution of *neutral* ferric chloride (obtained by adding just enough ammonia to any solution of ferric chloride, to start a permanent precipitate, and filtering), the resulting liquid will be of a magnificent violet-blue color. This color remains persistent for a long time. If the iron solution was slightly acid, the tint is more greenish. Presence of alcohol gives it a decidedly green tint; ether destroys the tint altogether. If the solutions are made with alcohol alone, the color of the mixture is brownish-green; but on diluting any such alcoholic mixture with water, the violet tint may be gradually, but more faintly, restored. Free acids prevent or destroy the reaction. Glycerine likewise prevents or destroys the blue violet tint,

and dilution with water does *not* restore it. All these solutions deposit, after some standing, a reddish-brown resinous matter on the sides and bottom of the vessel, which is more abundant if glycerine was present. From a superficial examination we find that this precipitate contains a small quantity of iron, probably as ferric oxide. As to the nature of the resinous deposit itself, it is a substance homologous to, possible derivative of, phenol, for it yields nitro- and bromo-substitution products like phenol. But, for want of time, we have not examined it any further.

Ferri Per- et Sub-Sulphas (B. F. Z.).—Presuming that the old nomenclature of chemistry will be more familiar to you than the new, we shall explain to you the difference between these two salts according to the former. A *per*-sulphate is understood to be the fully saturated compound of the *highest* oxide of an element with sulphuric acid. Now, a fully saturated, or in other words, a neutral salt, must have *as many equivalents of acid as there are equivalents of oxygen in the base*. The highest oxide of iron capable of combining with an acid is the sesquioxide Fe_2O_3, which, as it contains 3 eq. of O, must take up 3 eq. of sulphuric acid to become fully saturated or neutralized. This is then *per-sulphate of iron*, $Fe_2O_3, 3SO_3$. But whenever the amount of acid is deficient, or in other words, when the compound contains not as many full equivalents of acid as there are equivalents of oxygen in the base, then we have a *sub-salt* (also called *basic salt*) and in the case of sulphuric acid, a *sub-sulphate*. Theoretically there may be just as many sub-sulphates as can be produced to satisfy the above conditions, as for instance Fe_2O_3, 2 (or 1) SO_3; $2Fe_2O_3$, 5 (or 4, 3, 2, 1) SO_3, etc. But all these compounds do not exist. A sub-salt or basic salt may be considered as a saturated or neutral salt, holding an extra quantity of the oxide in solution; and it altogether depends on the solvent power of the neutral salt how much of the oxide can be retained. Now the officinal *subsulphate of iron* is such a compound, and through its very defect in acid it is so valuable a styptic; indeed, the less acid and the more sesquioxide of iron it contains, the less irritating are its effects. As prepared by the officinal process, the subsulphate of iron corresponds to the formula $2Fe_2O_3, 5SO_3$, and is known as *Monsel's Salt*, or, in a liquid form, *Monsel's Solution*. The other compound is the *per-sulphate*, or, as the Pharmacopœia terms it, *tersulphate*, which is only made use of on account of its known and constant composition for the preparation of other iron-salts.

Surgical Dressings (R. A. Wh., M.D.).—Lister's dressings are used at present everywhere, and the necessary appliances and materials can be obtained in every large city. We have lately received a circular from the "Internationalen Verbandstoff-Fabrik" (International Manufactory of Surgical Dressings) of Schaffhausen, Switzerland, which gives an idea of the variety of standard dressings commonly used in Europe. The list contains among others:

Carbolized cotton-charpie, Dr. Ehrle's styptic cotton-charpie, glycerin cotton-charpie, iodized cotton-charpie, arnica cotton-charpie, salicylic cotton-charpie, 4% and 11%; salicylic jute, carded and uncarded, 4% and 11%. *Prof. Lister's* gauze, silk protective, cotton protective or mackintosh; catgut, ligature-silk, borax-cotton and spray-apparatus. Prof. Tyndall's antiseptic respirators, rubber or wire; invisible respirators of rubber, to be held between lips and teeth; bandages and lint.

Aniseed Cordial (T. B., Salt Lake City).—From several formulæ on hand we select the following, which we believe will be found very satisfactory:

Oil of anise	2 drachms.
" of coriander	5 minims.
" of nutmeg	5 "
Alcohol	1 gallon.
Water	2 "
Syrup (simple)	1 "

Mix the oils with the alcohol, add the water, and filter if necessary, by the aid of a little magnesium carbonate, to be rubbed with a small portion of the liquid. Then add the syrup. The amount of anise oil may be increased, according to taste. Oil of star-anise is said to make a nicer preparation than the common oil of anise. Your other query will be answered in our next.

Exchange (Wash., D. C.).—You complain that we do not appear to appreciate the receipt of your "publication," by not sending you our own. We take the liberty of quoting *Martial* (Epigr. VII., 3) as a sufficient answer:

Cur non mitto meos tibi, Pontiliane, libellos?
Ne mihi tu mittas, Pontiliane, *tuos*.

Tully's Powder (M. M. H., Cleveland, O.).—There are three varieties of "Tully's powder," of which one contains morphia, another opium, while the third is without either. They may be found on pp. 153 and 1,260 of vol. i. of Dr. William Tully's Materia Medica, or Pharmacology and Therapeutics (2 vols., Springfield, 1858). The formula which is generally used as a substitute for Dover's powder is the following:

℞ Morphia sulph	gr. j.	
Camphoræ,		
Pulv. rad. glycyrrh.,		
Calcii carbonat	āā gr. xx.	M.

The second formula is:

℞ Pulv. opii	gr. j.	
" camphoræ,		
" rad. glycyrrh.,		
Calcii carbonat	āā gr. iij.	M.

The third formula is:

Pulv. camphoræ,		
" rad. glycyrrh.,		
Calcii carbonat	āā p. e.	M.

The last one may be administered as a "supposed" Tully's powder in cases where an opiate is contraindicated.

Brown Diachylon Plaster (D. E. K., Springfield).—This is the *emplastrum fuscum*, or else the *emplastrum fuscum camphoratum* of the German pharmacopœia. The former is prepared by boiling 64 parts of olive oil with 32 parts of finely levigated red lead in a copper vessel, until the mass has assumed a blackish-brown color, and adding 16 parts of yellow wax. The latter contains in addition 1% of camphor. They are known under various popular names, as *Emplastrum Matris*, *Mutterpflaster*, *Emplastrum Noricum*, *etc.*

Warburg's Tincture (J. R. N., M.D.).—The formula of this was published in the January number of this journal for 1876.

Acid Salicylic (Same).—This may be combined with wine of colchicum and with an alkali, without interfering with its effects in rheumatism. It has been ascertained that in treating this disease, it makes but little difference whether the salicylic acid be free or in combination. A good combination would be:

℞. Acid Salicylic	ʒ ij.
Vin. Colch. Sem.	fl ʒ iij.
Glycerinæ	fl ʒ ss.
Potass. Bicarb	ʒ ss.
Aquæ	q. s. ad, ʒ iv.

M. Tablespoonful.

To Preserve Cream (Same).—The best agents to preserve cream, which we consider applicable *generally*, are, 1, exposure to a freezing temperature; 2, addition of about 2 per cent. of boracic acid, and exclusion from air; 3, addition of sugar and careful concentration. A few trials, especially with the second process, will inform you as to results.

Artificial Ivory.—Two parts of caoutchouc are dissolved in 36 parts of chloroform, and the solution is saturated with pure gaseous ammonia. The chloroform is then distilled off at a temperature of 85° C. (185° F.). The residue is mixed with calcium phosphate or zinc carbonate, pressed into moulds and dried. When calcium phosphate is used, the product possesses to a considerable degree the nature and composition of ivory.

PRESCRIPTIONS AND FORMULÆ.

Syrupus Matico et Cort. Granati.—According to Perret (*L'Union Pharm.*), this syrup is one of the surest and most effective astringents against dysentery, cholera morbus, acute diarrhœa, etc. It is employed either pure or diluted with water.

Fol. matico	partes	20
Cort. granati	"	120
Aquæ bullient	"	1,200
Sacchari	"	2,000

The matico and pomegranate are infused with the boiling water, and allowed to stand, well covered, for twelve hours. The infusion is then filtered, and the sugar dissolved therein. Dose, a tablespoonful to a wineglassful.

Velpeau's Diarrhœa Mixture (*The Pharm.*).

Tinct. opii.,		
" " camph.		
" rhei	ää fl.	℥ j.
" capsici	fl.	ʒ vj.
Spts. menthæ pip.	fl.	ʒ x.

M.

Haarlem Oil (*The Pharm.*).

Linseed oil	2 pints.
Resin	1 pound.
Sulphur	1 "
Oil of turpentine	1 pint.
Strong water of ammonia	50 drops.

M.

"Carbolate of Iodine" (Dr. Percy Boulton's formula in *The Pharm.*)

Tinct. iodinii comp.	fl.	ʒ j.
Acid. carbolici		♏ vj.
Glycerinæ	fl.	℥ j.
Aquæ	fl.	℥ v.

M.

The solution soon loses its iodine color, becoming clear and colorless. It is used for inhalation.

ITEMS.

College of Pharmacy of the City of New York.—At the meeting of the Board of Trustees held on Thursday, Dec. 7, 1876, a series of resolutions respecting the death of the late Vice-President of the College, Mr. Bernard H. Reinold, were adopted, and ordered to be transmitted to the family of the deceased.

We have been requested to announce that no conversational meeting will be held in the month of December.

Adulterated Wines.—The police of Paris has ordered a strict examination of the wines offered for sale throughout the city. All the *commissionaires* of police are directed to examine, with the aid of experts, the wines sold by wholesalers and retailers in their respective districts, and to place any suspected package under seal. A sample of this is to be sent to a chemical commission, and in case the wine is found adulterated, the dealer is to be prosecuted, and the wine to be dumped into the gutter or the Seine. A considerable quantity of spurious wines has already been confiscated, both in the city and in the wine-growing districts.

The German Agricultural Council have had proposals made to them to cause legal enactments to be passed for a more strict surveillance of the manufacture of artificial wines, and for adequate punishment of their adulteration; but the Council evidently became nonplussed while attempting to make out a correct definition of "natural, improved, artificial, imitation, and adulterated wines," and gave up the subject in disgust.

Pills of Sulphate of Quinine.—In a communication to the *American Journal of Pharmacy*, Mr. H. P. Reynolds speaks very highly of the following formula for the preparation of quinine pills. He has tested the process for over three months, and during that period has made thousands of pills, which have always given entire satisfaction. He says that the quantities directed are correctly proportioned, and should not be altered.

Quinia sulph. gr. 600; acid tartaric, gr. 100; glycerine, ♏ 75. Rub the quinia and acid together in a mortar to a fine powder till no appearance of crystals remains, add the glycerine—just seventy-five mimims, no more, no less—and continue the trituration till the powder becomes adherent, when it should be beaten into proper form for handling and divided into the requisite number of pills. The mass is firm, solid, rolls well, does not set for some hours—is, in fact, a "beautiful mass," and the pills will be found quite small for their weight, very white if rolled in starch powder, and, however old or dry they may become, they remain perfectly and entirely soluble.

Leeches as Weather-prophets.—The *Journ. de Médecine de Bruxelles* has the following: "Into a flask of the capacity of 1¼ litres (about 45¼ fl. ozs.) pour 1 litre (about 34 fl. ozs.) of water, introduce a leech, cover the bottle with coarse linen, and place it in the window. If the leech remains motionless and coiled up at the bottom, this indicates lasting fair and clear weather, in summer or winter. If the leech ascends into the neck, rain or snow will follow, during which time it remains above. If windy weather is approaching, it swims about restlessly, and ceases to do so only when the wind abates. A few days before a severe thunder-storm, with rain, it remains entirely outside of the water, and throws itself about, apparently in convulsions, from one side to the other."

Polypharmacy with a Vengeance.—*The Sanitarian* gives the following prescriptions as copied *verbatim* from the originals of recent graduates. The apothecaries in the neighborhood of these young men should not fail to cultivate their acquaintance during these dull times.

℞ Extr. calabar gr. iv.
Quin. sulph. gr. xxxvj.
Croton chloral hydrat. gr. l.
Extr. nuc. vomic. gr. iv.
Extr. belladon. gr. viij.
Extr. cannabis indic. gr. viii.
Ferri sulph. exsiccat. gr. xxv.
Pulv. capsici gr. vi.
Extr. aloes gr. xij.
Pulv ipec gr. iv.
S. in capsul. xij.
One three times a day.

℞ Bismuthi subnitratis ʒ ij.
Sodii santonic. gr. xxxvi.
T. rhei aquosa ʒ ij.
Podophyll. gr. ij.
Ti. op. camph. ʒ iij.
Mixt. cretæ aromat. ʒ iij.
Pulv. hydrarg. c. creta gr. iv.
Syr. Krameriæ ʒ iij.
Olei. chenopodii ʒ i.
Pulv. acaciæ ʒ i.
One dessert sp. f. 3 or 4 times a day.

New Source of Arsenic-Poisoning.—The *Medical Times and Gazette* has the following: A lady in Paris complained of symptoms, which led the physicians to regard it as a chronic case of poisoning. It having been noticed that a glass of water, which used to be placed at her bedside at night-time, became occasionally opalescent from the presence of a whitish substance, this was analyzed and found to be arsenious acid. After much useless search it was finally ascertained that the brilliant white candles, which used to burn during the night in her bed-room, had been strongly impregnated with arsenic during the bleaching process, and that the poisonous constituent was volatilized during the burning of the candles at night.

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BIBLIOGRAPHY—
GRIFFITH (W. H.), Lessons on Prescriptions and the Art of Prescribing, 24
GROSS (S. D.), Treatise on Diseases of the Urinary Bladder, Prostate Gland, and the Urethra, 347
HAMILTON (Frank Hastings), Treatise on Fractures and Dislocations, 54
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